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THE IDENTIFICATION AND EVALUATION OF STUDENT TYPES AND THE INTERACTION OF THEIR COLLEGE EXPERIENCES WERE REPORTED. RANDOM SAMPLES OF COLLEGE FRESHMEN WERE EACH ISSUED FOUR INSTRUMENTS AND A QUESTIONNAIRE. APPROXIMATELY 560 RESPONDED. A SAMPLING WAS ALSO MADE ON APPROXIMATELY 130 ADDITIONAL STUDENTS TO PERMIT COMPARISONS OF BEHAVIORAL PATTERNS FOR RESIDENT AND NONRESIDENT STUDENTS. THE INSTRUMENTS USED INCLUDED A CHECKLIST, TWO DIFFERENTIAL INSTRUMENTS, AND A TYPE INDICATOR. ANALYSES CONSISTED OF FACTORIAL METHODS AND ANALYSIS OF VARIANCE. INDICATIONS OF DIFFERENCES APPEARED IN BEHAVIORAL PATTERNS, LEVELS OF SOCIAL CLASS, AND SEX, ALTHOUGH THE DIFFERENCES WERE SMALL. ATTITUDES, BEHAVIORAL EXPECTATIONS, AND BEHAVIORAL PATTERNS WERE IDENTIFIED. AN EXPLORATION OF ANXIETY LEVELS TO UNDERSTAND LATE-ADOLESCENT DEVELOPMENT WAS MENTIONED AS A POSSIBILITY FOR FUTURE RESEARCH. (RS)

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Cooperative Research Project S-327

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June, 1966

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The people most important to the study of patterns of college experiences were the close to 700 students who gave their time and somewhat personal information about themselves to provide the data of the study. Their willingness to do this without tangible returns is appreciated. The deans of students and other officers at the four colleges gave extensively of their time, facilities, and secretarial help in carrying out the study. Those involved in collecting data for the early development of the instruments were Dean Clifton MacLeod and Murray Via at Claremont Men's College and Dean Paul Bloland and Stephanie Adams at the University of Southern California. Brian Barnard, Gary Caldwell, Rob Hurtt, and Kim Mitchell provided valuable help with the early data collection at Claremont Men's College. Thomas Brigante, Keith Druley, Donald McNassor, and Stuart Oskamp, all of the Claremont Graduate School faculty, gave helpful criticism of the early versions of the instruments used and on the conduct of the study generally.

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PROBLEM

More than fifty years ago Woodrow Wilson made the following observation.

> "The real intellectual life of a body of undergraduates, if there be any, manifests itself, not in the classroom, but in what they do and talk of and set before themselves as their favorite objects between classes and lectures. You will see the true life of a college where youths get together and let themselves go upon their favorite themes--in the effect their studies have upon them when no compulsion of any kind is on them, and they are not thinking to be called to a reckoning of what they know." (Wilson, 1909)

Probably for as long as colleges and universities have been operating, perceptive faculty members and administrators like Wilson have known that the informal experiences students engaged in outside the classroom were playing a substantial part in the educational effects of colleges on students.

Wilson's concern was with the students' intellectual life. Half a century ago, when the college student population was relatively homogeneous with respect to social background, goals, and attitudes, the intellectual impact of out-of-class experiences could be considered fairly uniform and predictable. Today, as in Wilson's day, the intellectual development of college students cannot be adequately understood apart from the broad range of their college experiences. But the widely differing values, various sets of previous experiences, and divergent personal goals that characterize today's student population make the consequences of college experiences far more complex than was the case fifty years ago.

The same set of experiences in college can have different implications for different students in both personal and intellectual growth. Heath (1964), studying students at the university that had been Woodrow Wilson's, demonstrated the peculiar importance for particular students of such experiences as ushering at chapel service, getting cut from the football team, or engaging in a stimulating evening discussion. Vreeland and Bidwell (1964) and Scott (1965) have also shown that students respond differently in the same college setting. The attitudes and expectations a person brings with him to college, as well as his personal needs and inclinations, interact with the attitudes, expectations and behavior patterns of those around him. A setting one student finds intellectually stimulating and exciting and that leads him toward greater intellectual development may lead another student to reject intellectual involvement in favor of a quite different set of experiences.

Intellectual development and personal development are so intertwined that the intellectual goals of a college or university can be most effectively reached only if attention is given to the apparently nonintellectual aspects of college life, ". . .where youths get together and let themselves go upon their favorite themes. . ." Students at a large midwestern university provided evidence in support of this view when they described their dormitory experiences as more important than classroom experiences in leading to changes in attitudes (Lehmann & Dressel, 1962).

In spite of the current recognition of the importance of nonacademic experiences and of the complexity of their impact on today's heterogeneous student population, experiences are not often studied directly as the variable of major interest. Students are classified in various ways--by age, sex, aptitude, social class, type of college residence, and recently by value orientations (Clark & Trow, 1960). College settings are also being studied more closely than they had been as little as ten years ago (Astin, 1962; Pace, 1963; Stern, 1962; Stern, 1963). Typically, some anticipated outcome of college--usually grades, but occasionally changes in personality orientation--is studied in relation to either student characteristics or environmental characteristics, although the distinction between these two is not always clear. When grades of fraternity members are compared with grades of dormitory residents, for example, any difference found may be described in terms of the student characteristics that differ for the two groups or in terms of the differences in their college settings, depending on the predilections of the investigator. Usually ignored, or given only incidental attention, is the nature of the experiences engaged in by the several groups being studied.

Some differences in experiences are obvious when the groups being compared are described. Fraternity and sorority members can be expected, for example, to experience weekly ritualistic meetings that are not part of dormitory life. The frequency and type of social activities, the availability and use of older students for help with studies, group studying for examinations with access to previous examinations in the course at hand--all these may be areas in which experiences of fraternity and sorority members differ from those of dormitory residents. Presumably, differences in experiences of these sorts lead to different consequences of college attendance.

With the foregoing background, the issue to which the study here reported was directed can be stated. A major premise was that the effect on any individual student of attendance at college is a joint function of that student's personal characteristics and the characteristics of the college setting in which he moves. A second premise was that the college setting or environment has only an indirect effect, its influence being due primarily to the immediate, discrete, observable experiences students have which are partly determined by the environment. College outcomes are then a joint function of student characteristics and student experiences, even though experiences are to some extent a function of the college environment. Finding some order in the myriad events that make up students' college experiences is a major requirement for studying the effects of college attendance on students and the problem to which the study was directed.

If the discrete events in students' lives can be organized into patterns, these patterns may be large enough units of analysis to permit useful inferences about relatively large groups of students. The individual events themselves are probably too specific to be meaningful in any general way. At the same time, the patterns can be made sufficiently detailed to discriminate among the variety of orientation toward college found in today's students.

OBJECTIVES

The identification of patterns of college experiences and their association with various groups of college students was the major objective of the study here reported. This includes three interrelated purposes. The first was to identify, from among a large number of discrete events that college students might encounter, a manageable number of patterns of commonly associated events or experiences. The second was to identify groups of students who would ascribe to themselves similar patterns of behavior. The third was to associate patterns of experiences with various groups of students, some designated before the data were collected and others identified from the data in connection with the second purpose above.

PROCEDURE

Variables and Instruments

Patterns of experiences--the Checklist of Events

A self-report instrument was desired that would indicate common patterns in the observable, discrete events of students' lives. The events were to be clearly specifiable as to their nature and the time and place of occurrence. "Taking a course in history," while observable, is too diffuse in its behavioral implications to give the kind of information desired. Items such as, "Argued with an instructor," that specify particular instances of behavior, were preferred. A sufficiently large number of discrete events was considered likely to reveal stable clusters or patterns that would indicate the general forms of behavior in which the students customarily engaged. Student behavioral characteristics would then be inferred from a number of items to which students could respond with some confidence rather than from a few global items of the sort, "Do you often go out of your way to talk to other students?" This approach is analogous on a behavioral level to multi-item personality scales, such as a scale of social introversion composed of thirty or forty items touching on interpersonal behavior rather than a few items of the kind in the preceding sentence. The resulting instrument was the Checklist of Events, attached as Appendix A.

To permit the students to respond realistically to items dealing with relatively small segments of behavior specifiable as to time and place, a limitation was put on the time span during which behavior was to be reported. The incidents or events were to have occurred within the two-week period immediately preceding completion of the self-report instrument. A two-week period was selected rather arbitrarily under the assumptions that most of the events that that occurred during that period would be fresh in the students' memories and that opportunity for a wide variety of incidents to occur would still have been provided.

Items were written to provide data in four general areas--academic behavior, behavior in organized group settings, informal interpersonal behavior, and solitary behavior. Academic behavior was considered to include classroom behavior and out-of-class behavior, such as studying or talking about a course with a professor, that was clearly oriented toward course activities. Reading of material not directly related to a course was not considered academic behavior. Behavior in organized group settings was that associated with organized groups or activities, such as fraternities, clubs, or student government, and that was directed toward organizational goals. Informal discussions of campaign strategy for a student election was considered organized group activity; bull sessions in a fraternity were considered informal interpersonal activity. Solitary activities included reading or studying alone, taking a walk, sleeping late, and similar incidents. Measurement of these four categories of behavior was not the purpose of the instrument. They were used only as a device to ensure that the items written would cover as broad a range as possible of the kinds of behavior in which college students commonly engage.

Several sources of items were used. Personal experience with college students was one. A series of interviews with college seniors focused on retrospective views of their college experiences was another. The report of a four-year study of Princeton students (Heath, 1964), the Experience Inventory used at Michigan State University (Lehmann & Dressel, 1962), and Stern's Activities Index (Stern, 1962) also suggested items. While the Checklist of Events was being developed, Astin (1965) reported results with a similar instrument developed from a slightly different rationale. Some of his items, rewritten and given a different response format, were used.

Variation in the frequencies with which different types of incidents occurred prompted the use of a three-level form of response. Doing badly on an examination, for example, would not be expected to occur more than once or twice if at all during a two-week period. Having a coffee date, on the other hand, could be a frequent event. To accommodate both these types of items with one response form, three levels of response were provided--"Not at all," "Once or twice," and "Three or more times." These three-level responses were then made dichotomous after the data were collected by combining the two adjacent levels having the smallest total number of responses. For some items the dichotomous split was between responses of seldom or often, that is once or twice as opposed to three or more times during a two-week period. For other items the split, in effect, was between, "Yes, I did have this experience at least once," and "No, I didn't do this at all."

Development of the measure of patterns of experiences did not start from any preconception of the particular patterns to be measured. Finding a set of items that would predict some criterion was therefore not possible. What was wanted was a broad sampling of possible events or experiences within which patterns could be sought. In the absence of a directing theory, one effective way to reduce a large number of variables to a smaller number while retaining as much information as possible is factor analysis. The matrix of inter-item correlation coefficients was therefore factored and factor scores computed for each subject.

In spite of the loss of some information in combining categories, reducing the item responses to a dichotomous form was desirable to permit the use of tetrachoric correlation coefficients before factor analysis of the item response correlation matrix. Carroll (1961) has recommended the use of tetrachoric correlations prior to factor analysis for several reasons. Tetrachoric r does not require assumptions about the scaling properties of the data as does the

Pearsonian r. Assumptions as to the interval or ratio nature of the scales are necessary only in interpreting the value of a tetrachoric r, not in interpreting the underlying dimension of the correlation matrix. Carroll further proposes that tetrachoric correlations are likely to give closer approximations to the true latent relationships among psychological variables than are Pearsonian correlations.

A preliminary form of the Checklist of Events was administered to 100 men at Claremont Men's College and to 50 women at the University of Southern California. Items to which 90 per cent or more of the students in each sample gave identical responses were rejected. Additional items were written to cover areas of behavior believed inadequately represented in the first set of items. The final instrument (Appendix A) consisted of 198 items.

Patterns of behavior--the Behavioral Differential

The Checklist of Events described above, was developed to determine the patterns of events students had actually experienced during a specified period of time. Its responses were therefore influenced by the particular circumstances surrounding the students during a limited period prior to their completing it. With a sizeable sample of students, a wide range of experiences and the emergence of stable patterns could be expected. Nevertheless, some major events or types of events that are important to students might not have occurred during the period reported on and would be missed. A second instrument, the Behavioral Differential, attached as Appendix B, was therefore developed to explore a wide range of hypothetical experiences rather than those actual experiences that had happened.

A number of situations that students can be expected to encounter were described. Descriptions of roughly equal numbers of situations that could be classified as academic, organized group, and informal interpersonal, as with the Checklist of Events, were written. Solitary situations were not included, but possible responses of a solitary nature to the other situations were provided.

With each hypothetical situation, a number of possible ways of responding were described. For example, a situation such as the following might be described:

> You have an important paper due tomorrow, but by early evening you still have only a small part of it written and are not sure how to complete it.

The students would indicate what their probable behavior would be by checking various possible forms of response, such as these:

> Keep working on it until I got it done, all night and into the next day if necessary.
>
> Go to the library for an hour or two more of background reading and then finish it.
>
> Do as well as I could by 11:00 or 12:00 o'clock and turn in whatever I got done.
>
> Do as well as I could, but ask the instructor for more time if I didn't consider it sufficiently well done.

Under each of the possible forms of response to the situation, the students indicated on a nine-point scale the liklihood that they would or would not behave in that way.

The Behavioral Differential is patterned after Triandis's Behavioral Differential (Triandis, 1964), which is a modification of the semantic differential (Osgood, Suci, & Tannenbaum, 1957). The Behavioral Differential as used here differs in some important ways from Triandis's, however, in spite of an almost identical format. Each of the hypothetical situations could be expected to elicit different forms of response. Comparable response scales across all situations were therefore not possible. On Triandis's Behavioral Differential, the subjects rated the probability of their behaving in a given way toward a specified person. The person toward whom the potential behavior was directed was varied, but the forms of behavior remained constant. The major consequence of this deviation from Triandis's procedure is to prevent comparisons of behavior across situations. For this reason the entire set of situations and responses was factored as a whole to indicate the dimensions of behavior underlying all the situations in a body.

Several initial versions of the Behavioral Differential, having a total of thirteen different hypothetical situations and eight responses to each situation, were administered to 100 men at Claremont Men's College. On the basis of the several factor patterns that emerged from these forms of the instrument, several highly redundant situations and responses were removed and some new situations were written to include forms of behavior inadequately represented in the earlier versions. The final instrument (Appendix B) consisted of ten hypothetical situations, each with five ways of responding. This provided, in effect, 50 variables, each with a nine-point scale on which the subjects indicated the probability of their behaving in that way. The 50 variables were factored to determine their underlying patterns.

Patterns of behavior--the Attitudinal Differential

Triandis (1964) developed his Behavioral Differential as a measure of the behavioral dimension of attitudes, a form of attitude he termed behavioral intentions. The Behavioral Differential used here did not provide clearly specified objects toward which attitudes could be expressed and is therefore not a measure of attitudes in one sense. Yet another dimension of attitudes discussed by Triandis, the evaluative dimension, suggested a modification of the Behavioral Differential that would indicate the students' emotional or evaluative responses to the hypothetical situations.

A parallel instrument, the Attitudinal Differential, attached as Appendix C, described the same hypothetical situations and then listed 13 terms expressing emotional responses or feeling. The subjects checked on a nine-point scale the likelihood that they would feel each of the specified emotions in that particular situation.

The Attitudinal Differential is quite similar to the semantic differential but differs in asking the subjects to indicate their feelings in a given situation rather than the adjectives applicable to a given concept. In spite of the fact that the terms, or scales, used in the Attitudinal Differential are used as adverbs rather than adjectives, they parallel closely the adjectives of the semantic differential (Osgood, Suci, & Tannenbaum, 1957). Adverbs were provided that tap the dimensions most frequently found in the semantic differential, the evaluative, potency, and activity dimensions. The subjects in effect, then, described their feelings in each situation along dimensions similar to evaluation, potency, and activity. Again, trial runs were made with students at Claremont Men's College.

Analysis of the Attitudinal Differential corresponded to the usual treatment of the semantic differential. Responses to each situation were factored independently of each other. Patterns of emotional response in various situations were thus provided. These could then be related to the behavioral patterns that emerged from the Behavioral Differential. The emotional and behavioral patterns of both these instruments were compared with the dimensions of actual behavior provided by the Checklist of Events.

Student subcultures--the Student Type Indicator

The differences in the attraction of some colleges or types of colleges for some students has become well documented. (McConnell & Heist, 1962). Students who enter private liberal arts colleges, for example, differ in many ways from those at state colleges. And within a type, individual colleges may differ sharply in the kinds of students they attract. Becoming almost as well documented is the existence within single colleges of subgroups of students differing in their goals, in their attitudes toward college and their experiences while there, in their background characteristics, and in a variety of other ways that distinguish one student subgroup or subculture from another (Astin, 1965; Clark & Trow, 1960; Gottlieb & Hodgkins, 1963; Pace, 1963; Peterson, 1965; Stern, 1965). An important way to classify students in order to study their characteristic experiences is therefore by subculture.

Students have probably been classified according to some scheme for as long as colleges have had students. A recent scheme that has been given wide attention and that has been usefully applied in a number of colleges is one proposed by Clark and Trow (1960). They have described four student subcultures that differ in their commitment to ideas or intellectual activity and in their identification with their college.

In the *vocational* subculture, the major purpose of a college education is seen as preparation for an occupation. Extracurricular activities are considered extraneous and intellectual development for its own sake is seen as either unimportant or as a luxury that must not interefere with vocational preparation. Students in this subculture are committed neither to the college nor to ideas, but to their own occupational preparation.

The academic subculture, in contrast to the vocational, values intellectual pursuits for their own sake. The major purpose of college is the pursuit of knowledge. Students in this subculture are deeply involved in course work and identify strongly with their professors. They are committed both to the college and to ideas.

The collegiate subculture places relatively less value on either occupational preparation or scholarly pursuits than on social pursuits and extracurricular activity. College is necessary for the development of social and cultural sophistication rather than for specific vocational or academic preparation. Students in this subculture are strongly committed to their college, becoming mainstays of alumni groups, but are not committed to ideas.

The nonconformist subculture is characterized by rejection of traditional or commonly held values. The utilitarianism of the vocational subculture, the self-indulgence of the collegiate subculture, and the conformity of the academic subculture are all rejected in favor of the pursuit of individual interests and goals, even though they may be poorly defined. Students in this subculture are strongly attracted to the pursuit of ideas, but it must be on their own terms. They are committed to ideas but not to the institution.

Among other student typologies, two recurring themes have centered around activities or orientations that may be termed status seeking and identity seeking.

Pace (1960; 1964) has described both a college environment and a student subculture characterized largely by a drive toward social or occupational standing, prestige, recognition, or status. Stern (1963; 1965) found achievement factors in measures of both personality and college environment that are closely related to desires for status. Mogar (1964), in a study limited to students at a single college, found most of the men he studied to be concerned with position, income, status, and family closeness. Development toward a career, nationally the most commonly perceived purpose of a college education, was considered by Mogar's students as a means toward income, material security, and status rather than as an end in itself.

A substantial minority of the students in Mogar's study were concerned more with the development of a personal identity than with occupational development and status. Twenty per cent of the men and slightly more women considered developing a personal identity to be the most important activity in which they would engage after graduation. Almost no overlap existed in Mogar's sample between students concerned with status and those concerned with identity.

One of five dimensions of student environments that emerged after extensive development of the College and University Environment Scales (Pace, 1963), the Awareness Scale, emphasizes self-understanding, reflectiveness, identity, and a search for personal meaning. The pervasiveness of these two orientations--a striving for position or status and a search for identity--in current literature on college students suggests their examination as devices for classifying students.

Clark and Trow have cautioned against the use of their subcultures as rubrics for classifying students. They point out that students may participate in several subcultures, and the subcultures themselves are neither sharply distinct nor static.

Nevertheless, they are used to describe student groups and have been used to classify individual students (Gottlieb & Hodgkins, 1963; Pemberton, 1963; Peterson, 1965). Clark and Trow themselves define their four subcultures by describing the students found in them. With some recognition of the dangers in the uncritical use of any abstract classificatory scheme, starting from current knowledge of student subcultures in studying patterns of college student behavior seems promising.

The ambiguities in the Clark-Trow subcultures were an issue of interest in addition to the usefulness of the subcultures in identifying types of students. The nonconformist, academic, and identity-seeking students are all attracted to the pursuit of ideas. For individual students, or even for particular groups of students, the distinctions between these subgroups may not be great. The status-seeking students have much in common with the vocational students, but differences in focus lead to confusion. One classification emphasizes the acquisition of status, in which occupational level plays a major role. The other emphasizes occupational preparation, but the level or status of the occupation being sought is of distinct importance. The status-seeking student also has elements in common with students of the collegiate subculture with status in the collegiate subculture socially rather than occupationally derived.

Clarification of the academic-nonconformist confusion within the Clark-Trow categories and integrating the status-seeking and identity-seeking orientations with them should be useful in interpreting whatever differences in patterns of experiences might be found. If the observed patterns of experiences should fall generally within subculture boundaries as Clark and Trow describe them, or perhaps as elaborated by the incorporation of status-seeking and identity-seeking, understanding of the subcultures would be increased and a moderately well-developed set of concepts would be available for interpreting the variations in experiences.

The Student Type Indicator was developed to examine some of the uncertainties in the Clark-Trow categories and to aid in the interpretation of other student subgroups observed. Descriptions of hypothetical students were written to represent reasonably clearcut types in three of the Clark-Trow categories (the collegiate subculture excluded) and the two additional categories of status-seeking and identity-seeking. The students in the study were asked to rate the degree of similarity of all possible pairs of these hypothetical students. From the similarity ratings, the dimensions on which the real students perceived the similarities and differences of the hypothetical students could be determined through multidimensional scaling procedures (Torgerson, 1958). The same ratings of similarity could also be used to determine the points of view or frames of reference from which the real students made their judgments (Tucker, 1960; Tucker & Messick, 1963). Students at different colleges, for example, might have different perceptions of student types. Or men might differ from women or commuters from residential students in their perceptions. If so, the ratings of similarity should be analyzed separately for each point of view.

To develop the instrument, descriptions were written of 30 hypothetical students, 5 for each of 6 categories. The six categories were Clark and Trow's vocational, nonconformist, and academic subcultures, the status-seeking and identity-seeking orientations, and a combination category that included elements of both the academic and nonconformist categories. Nine judges--professors and graduate students in education and psychology--were given written descriptions of the five categories (excluding the combination category) and assigned the hypothetical students to one of the categories.

The category descriptions used by the judges are given below.

Vocational: Concerned with future occupational activities and with preparation for them; college is important primarily for entrance to desirable occupations.

Academic: Intellectually involved; pursues knowledge; identifies with faculty and scholarly activities.

Nonconformist: Attention is focused primarily on his own attitudes and concerns, rather than on group activities or norms; prides himself on being independent of group pressures; sees himself as an individual; may be intellectually inclined, but on his own terms rather than those of the faculty.

Identity seeker: Concerned primarily with the pursuit of an identity; introspective; explorative; his relations with others and with groups are used to try out roles; concerns with others are primarily in terms of their response to his own behavior, and as possible role models to try out, rather than because of any inherent interest in them as individuals.

Status seeker: Concerned primarily with other people, but largely in terms of their prestige and the status that will rub off from them onto him; sees his own advancement in terms of the influential people he can become intimate with. Deeply involved with campus groups, but primarily in terms of the status that goes with membership.

For 20 of the hypothetical students, at least 7 of the 9 judges agreed on the category in which they should be placed. Four of the hypothetical students, those intended to be ambiguous as to their placement in either the academic or nonconformist categories, were placed four times in one and at least three times in the other, with no more than two classifications that were neither academic nor nonconformist.

All possible pairs of these 24 hypothetical students were rated for similarity by 100 Claremont Men's College students and 50 University of Southern

California girls. Multidimensional scaling was not carried out with these ratings, but variances were computed. The hypothetical student with the largest average variance in each of the six categories, regardless of which other hypothetical student he was paired with, was discarded. The remaining 18 descriptions, reworded slightly, constituted the final instrument. Each of the six categories (including the ambiguous one) was represented by three hypothetical students.

The 18 descriptions of hypothetical students, identified with the student subculture each is intended to represent, are listed below.

Vocational

1. He doesn't see much point in classes that don't give him something useful in a job.
2. His major purpose in college is to get prepared for an occupation.
3. He works for good grades because they are what employers will be interested in at graduation.

Academic

4. He sometimes gets so interested in a topic he goes into it more deeply than the course requires.
5. He's more concerned with exploring ideas than with getting grades.
6. He's frequently found in a hot discussion of an issue that came up in class.

Nonconformist

7. He remains pretty much independent of other students' standards and of group pressures.
8. He's often involved in social concerns and protests, seeking and supporting change.

9. He sees little value in customs and traditions, remaining detached from them or even hostile about them.

Identity seeker

10. He looks for new experiences or [illegible] approaches to familiar situations.

11. His major concern is understanding himself and his relationships with others.

12. He gets more involved with off-campus groups than with on-campus groups.

Status seeker

13. His major concern is knowing and being accepted by people considered important, whether students, faculty, or administrators.

14. He puts considerable importance on being recognized as a leader by the other students.

15. His high points of the year are Homecoming Week, the Spring Carnival, and similar all-campus events.

Combination (Academic-Nonconformist)

16. He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

17. He's concerned with esthetic qualities--in art, music, literature, or drama.

18. He often questions what the purpose of college is after all.

All possible pairs of these 18 descriptions of hypothetical students made 153 item-pairs. These 153 item-pairs were placed in random order and separated into three groups of 51 item-pairs. Each of these sets of 51 item-pairs constituted one form of the Student Type Indicator, one form of which is attached as Appendix D, and the forms were distributed randomly among the subjects of the study. Approximately one-third of the total sample completed each form, rating the degree of similarity on a nine-point scale for each item-pair on that form. Similarity was treated as the inverse of distance. The ratings of similarity were scaled with maximum similarity at the low end of the scale to provide a measure of interpoint distances among the 18 hypothetical students, each of which was considered a point in a multidimensional space. Multidimensional scaling procedures led to identification of the dimensions of similarity (Torgerson, 1958) and to specification of the number of points of view from which the real students perceived the hypothetical students (Tucker & Messick, 1963).

Biographical Questionnaire

The instruments described above were designed to indicate variations in (1) patterns of actual experiences during a limited time span, (2) behavioral intentions with respect to a range of hypothetical situations, (3) self-predictions of emotional response to the same hypothetical situations, and (4) perceptions of student types. Classification of the students, according to various schemes, was desired to aid in the interpretation of the differences in patterns of experiences expected to be found. Finding that some students typically encountered a set of experiences foreign to other groups of students would be of limited value if the various groups of students identified by differing patterns of experiences could not be characterized in some way independently of the experience patterns.

Four characteristics commonly associated with different college experiences are sex, environment (Astin, 1964; Stern, 1962), type of college residence (Matson, 1963; Prusok, 1964; Stark, 1965), and social class (Ellis, 1964; McArthur, 1960). The students completed a two-page biographical questionnaire attached as

Appendix E, on which these variables were indicated.

The selection of random samples from the freshman classes at three coeducational colleges provided subjects of both sexes in three different environments. The three colleges were a public junior college of about 10,000 students with twice as many men as women, a four-year state college of about 12,000 students with slightly more men than women, and a private liberal arts college of about 1,600 students with slightly more women than men. Comparisons among the three colleges have little meaning in view of the large number of parameters on which they differ. They were selected simply to provide three diverse environments. Elaboration of any differences in experiences associated with the environment will require additional study.

Type of college residence. The major distinction made among types of college residence was whether the student lived at home and commuted to the campus or lived on or near the campus. Students who lived at home or with friends or relatives were classified as commuters. Those who lived in dormitories, rooming houses, co-ops, or private apartments were classified as residential students. The distinction in these two classifications is not always one of distance. Rather it differentiates the students who have left their parents' home and are living without immediate adult supervision from those still under parental supervision.

Social class. No definition of social class and no single set of indicators of social class have been generally agreed upon. Occupation is the most widely accepted single indicator of social class, and level of education is a second commonly used indicator. Both these variables are highly related to a general measure of social class (Kahl & Davis, 1955). An index of social class was used that was derived from a combination of father's occupation and parents' education, two readily determined pieces of information.

On the biographical questionnaire the students wrote their father's occupation and indicated on a checklist the educational level reached by each parent. Occupations were then coded by level according to the scheme developed by Roe (1956). This is a six-level classification scheme based primarily on the degree of responsibility associated with the occupation and secondarily on skill or capability. The six levels are defined below.

1. Professional and managerial - top. The major element of this level is independent responsibility. It includes top managerial and administrative people as well as those professional persons who have independent responsibility in important respects. At this level, there is usually no immediate superior to whom the person reports.

   Criteria include responsibility for policy making and other important, independent, and varied responsibilities. In occupations for which educational level is relevant, the doctoral level or its equivalent would be required. Major business executives, high governmental officials, and creative artists would be examples of people at this level for whom education is not necessarily relevant.

2. Professional and managerial - middle. This differs from level one primarily in degree. Responsibilities for the work of other persons are not so broad. Policy is interpreted rather than made. A college education at the bachelor's level is usually required when education is a relevant consideration.

3. Semi-professional and small business. Responsibility for the work of others is not required or is not great. Policy is applied or determined for self only, as in managing a small business with two or three semi-skilled or unskilled employees. Education is usually high school plus technical school or other post-high school education below the bachelor's degree.

4. Skilled. These occupations require apprenticeship and other special training or experience.

5. Semi-skilled. These occupations require less training than the skilled occupations. Usually less initiative and autonomy is permitted.

6. Unskilled. These occupations require no special training and not much more ability than that required to follow simple directions.

Census estimates for 1964 (U. S. Bureau of the Census, 1965) were used to develop a common unit of measurement for occupational and educational levels to permit their combination into a single index. The distribution of the total population over Roe's six occupational levels was estimated from figures for the U. S. Census classification of occupations. From a table of the normal distribution, a z-score corresponding to the proportion of the population falling below the midpoint of each occupational level was assigned to each level. The z-score was then multiplied by 10 and increased by 50 to give a standard score with a mean of 50 and a standard deviation of 10.

The distribution of years of school completed by persons twenty-five years old and older, for each sex, was used in a similar way to assign standard scores to the educational levels of fathers and mothers reported by the students.

The three standard scores were then combined according to the following equation to provide a single index of social class.

$$Y = X_1 + 0.3X_2 + 0.5X_3$$

Y = Social class
X_1 = Father's occupation
X_2 = Father's education
X_3 = Mother's education

The weights assigned each variable are arbitrary. Roughly equal weight was desired for occupation and education. A weight of 0.5 for each of the two education variables and 1.0 for occupation would accomplish this. Since the father's educational level is already represented to some extent in his occupation, however, the weight for father's education was arbitrarily reduced to 0.3.

With the procedure just described, the index of social class for the entire sample had a mean of 100.2, a standard deviation of 8.4, and a range from 66.2 to 119.6. This distribution was divided as closely as possible into fifths, providing five levels of social class with approximately equal numbers in each class.

Sample

Within each of the three college environments from which subjects were to be drawn, samples of approximately 200 students were expected to provide enough representatives of both sexes, of several types of residence, and of several levels of social class to permit adequate comparisons among them. The subjects were limited to first-time freshman students to provide information on patterns of behavior at the beginning of the college experience and to restrict the observations to a specifiable subgroup of students. From lists of all first-time freshmen at the three colleges--a public junior college, a four-year state college, and a four-year, private, liberal arts college--250, 300, and 250 names were randomly selected by using a table of random numbers. Approximately 200 respondents at each college were expected. A larger number was selected at the state college because a different procedure for soliciting participation there had been planned and a lower response rate was anticipated. Slightly different procedures, however, were followed at each college.

At all three colleges, letters describing the study, its general purposes, what would be expected of the students, and the time required (two to three hours)--and giving assurances of anonymity--were sent to the students on the three lists. At the state college, packets of the questionnaire materials were mailed a few days later to the students at their homes with a request that they complete the materials and leave them at the counseling office of the college, where they would be picked up by someone from College Student Personnel Institute, the agency conducting the study. At the junior college, the packets were delivered to most of the students in their orientation classes. Packets were mailed to the homes of those students not reached in that way, The students returned the packets to an office in the administration building, where they were picked up by a person from the Institute. The initial letter to the students at the private college included a return postal card on which the students were to indicate whether or not they were willing to participate in the study. Packets were then mailed only to those who so indicated. As at the other colleges, packets were returned to an office in the administration building from which they were picked up.

Approximately one week after the packets were distributed, a followup postal card was sent to those students whose packets had not yet been returned. A similar card was sent to those students at the private college who had not returned the postal card indicating their decision about participating in the study. A week later, a followup letter was sent, which was then followed ten days later by telephone calls to students who still had not responded. Most of the students responded to the various instruments between mid-October and mid-November, 1965, four to eight weeks after the start of the semester. A few packets were completed as late as early December.

The final response rate in the three colleges was 70 per cent. In the junior college and the state college the response rate was 79 per cent; in the private college it was 52 per cent. The low response rate at the private college seemed due to the lag in the procedure introduced by having the students request the packet of materials before it was sent to them. Seventy per cent of the private college sample returned postal cards, of which more than 90 per cent indicated a willingness to participate in the study. Yet the final response, even after several followups, was only 80 per cent of those who had returned postal cards indicating a desire to participate.

The sample provided by the three initial colleges was supplemented by a group from a fourth college to permit comparisons not otherwise possible. The junior college had no residential students and the state college had only a small number of women students living in a dormitory. All other students at those two colleges commuted. The private college had only a handful of commuter students; almost all students lived in dormitories. Comparisons between commuter and resident students would therefore be confounded with comparisons across college environments. To permit unconfounded residential comparisons, students were solicited from a fourth college--a four-year state college in which several hundred students lived in dormitories. All the first-time freshman students in the dormitories were asked to participate, and a random sample of roughly equal numbers of commuter students were also contacted. The Student Type Indicator was not included in the packet sent these students. With one followup letter a 66 per cent response was achieved. Returns were received from 57 resident students (15 men and 42 women) and 70 commuters (24 men and 46 women).

Table 1

Sample Distribution by College and Sex

College	Men	Women	Total
Public junior college	93	99	192
State college	90	148	238
Private college	38	93	131
Second state college	39	88	127
Total	260	428	688

The composition of the total sample by sex and by college is provided in Table 1. Social class varied with college, but not as sharply as did type of college residence. The distributions of students across the five levels of social class at each of the four colleges are shown in Table 2. Because the five levels were defined by dividing the total sample roughly into fifths, the distribution within the total sample is uniform.

Table 2

Sample Distribution by Social Class, College, and Sex

(Percentages)

Social Class	Junior College		State College		Private College		Second State College	
	Men	Women	Men	Women	Men	Women	Men	Women
1 (High)	14	12	18	17	33	35	29	20
2	22	14	21	24	27	28	16	25
3	24	20	26	21	21	18	32	25
4	18	26	23	22	6	12	11	17
5 (Low)	22	27	12	16	12	7	13	13
Total	100	99	100	100	99	100	101	100

Treatment of the Data

Two basic kinds of data were collected. One kind was to indicate behavioral patterns of the students--actual behavior in which the students engaged, behavioral intentions associated with different situations, and emotional responses to different situations. The second kind of data was to provide several ways of classifying students. Differences in behavioral patterns could then be associated with membership in various subclassifications.

Behavioral patterns

The Checklist of Events, described earlier, was the primary measure of behavior, since it consisted of reports of actual behavior of the students. Tetrachoric correlation coefficients were computed between all possible pairs of items on the Checklist. Factor analysis of this 198 x 198 correlation matrix, broken down into four overlapping 80 x 80 submatrices, provided a number of dimensions of behavior underlying the item responses. Factor scores were estimated, using approximately 10 items for each factor, by treating the set of items with the highest loadings on a factor as a scale, and scoring the items 2, 1, or 0. Items with loadings of 0.5 or greater on a factor were given a weight of 2. Items with loadings between 0.3 and 0.5 were given a weight of 1. A loading of 0.3 was the minimum for any item used in estimating factor scores. Mean factor scores were then compared among the various subgroups of students.

Factor score comparisons by sex, college, and social class were made with a 2 x 3 x 3 analysis of variance. The five levels of social class were collapsed to three, the middle two and the lower two being combined after analysis of the Behavioral Differential indicated the major social class differences to be between the highest level and the other four. Since the three initial colleges of the study were not selected to be representative of any population of colleges but were treated simply as three different environments, all three factors--sex, college, and social class--were considered fixed rather than random factors, with all levels of each factor being sampled. Variations in cell frequencies resulted from population characteristics associated with sex and social class. Cell frequencies were therefore used to weight the sums of squares in a least-squares procedure (Winer, 1962, pp. 291-296). The absence of any significant three-way interactions permitted treatment of the data in a series of two-way analyses.

When a significant F-test indicated a high probability that some relationship existed between a variable and a behavioral pattern, a measure of the strength of association was computed. The measure used is omega squared, (Hays, 1963, pp. 406-407), a statistic that indicates the proportion of the variance in one variable accounted for by the variation in a second variable. Comparisons were then made, using a method due to Scheffe (Hays, 1963, pp. 483-485), to indicate the sources of variation to which the relationship could be attributed.

Comparisons of residential with commuter students were made with a two-way analysis of variance of sex by residence for students at the state college added to the sample for this comparison. For the remainder of the sample, type of residence was confounded with college setting and was not introduced into the analysis.

Because of the smaller number of variables in the Behavioral Differential and Attitudinal Differential, as compared with the Checklist of Events, factor scores were computed from responses to all the variables on the instrument.

These were treated in a 2 x 3 x 5 analysis of variance, all the levels of social class being included. A total of nine factors from the Checklist of Events, four from the Behavioral Differential, and four from the Attitudinal Differential were analyzed in this way.

Relationships among the 17 factors on the three instruments were examined simply by inspection of the bivariate distributions of pairs of factor scores and of the correlations among them. Since the factors all emerged from the data of the study, in contrast to the variables of sex, college, residential status, and social class, comparisons among them can be no more than suggestive. Nevertheless, they can be expected to provide useful starting points for further studies.

Types of students

The Types of Students Indicator was analyzed in the manner described earlier. Ratings of similarity of 18 hypothetical students were treated as the inverse of distances between the hypothetical students. Multidimensional scaling was used to identify the dimensions underlying the ratings of similarity. A form of inverse factor analysis (Tucker & Messick, 1963) was used to determine the number of points of view from which the similarity ratings were made.

Another method of classifying students was based on the students' responses to the Behavioral Differential, their statements of the probably ways they would behave in various situations. The correlations among students rather than among variables were factored in an inverse factor analysis procedure often called the Q mode of analysis. This procedure leads to the identification of clusters of students who respond similarly to the items on the instrument. The more common factor analysis procedure leads to dimensions underlying the responses, producing the patterns of behavior of the present study. Patterns of individuals, or types of students, are identified in a Q analysis.

The procedure used was a computer program written by Manson and Imbrie (1964) and modified by Donald McIntyre of the Department of Geology at Pomona College. This program provides for a varimax rotation of the initial factor matrix to an orthogonal solution. The independence among the factors provided by an orthogonal solution may not be consistent with an intuitively more satisfying solution that permits some degree of interdependence among the factors. The Manson and Imbrie program therefore computes an oblique factor solution that starts from the variables with the highest absolute loadings on each of the factors in the varimax solution. The result in the Q analysis of the present study was a set of factors each defined by an individual student at its extreme, a sort of prototype student. The other students were ordered in terms of their similarity to each extreme individual, and a set of student types was thus obtained.

The Manson and Imbrie program in the form used is limited to 100 variables. For the identification of student types from the data of the Behavioral Differential, responses were factored for three separate groups of 100 students each. Two sets of 100 students were made up of 50 men and 50 women selected randomly within the groups from each college. The three colleges initially used in the study were equally represented by 30 students each, half men and half women. The other 10 students were 5 men and 5 women from the added state college. Student types associated with sex or with any individual college, if they existed, could therefore be expected to appear.

The third set of 100 students was evenly divided by sex and by college, but only the private college and the junior college were represented. The selection was again random within these two classifications. The decision to select students in this way was made after mean factor scores of these two colleges on the Behavioral Differential were found almost invariably to fall at opposite extremes, with the state college at an intermediate point.

The Q analysis only identifies those students similar to a prototype student in their responses to the Behavioral Differential. It provides no information about the characteristics of any student type identified. This information was derived from individual factor scores on the various instruments and from the students' classifications by sex, college, and social class.

RESULTS

Patterns of reported behavior

The Checklist of Events consisted of 198 statements of discrete activities (e.g., wrote a letter home, cut a class, argued with an instructor) checked by the students to indicate which ones they had engaged in during the preceding two-week period. The three levels of response permitted were "Not at all," "Once or twice," and "Three or more times." Two of the three levels were combined to make the responses dichotomous, the combination depending on which of the two extreme levels was most frequently indicated. The extreme category less often checked was combined with the middle response. For example, more students indicated they had missed a meal three or more times during the preceding two-week period than indicated "Not at all" for that item. "Not at all" was therefore combined with "Once or twice" into a single response category. For the item, "Turned in a paper late," the responses "Once or twice" and "Three or more times" were combined, since more students checked "Not at all" for that item than "Three or more times."

Two purposes were accomplished by offering three levels of response even though two were later to be combined. The frequency of occurrence of some activities is such that almost everyone engages in them to some extent (e.g., argued with another student). They discriminate only in terms of frequent or infrequent instances of such behavior. Other activities are engaged in only occasionally, and the discriminating classification would be whether a person engaged in that behavior at least once or not at all (e.g., exhibited a painting at an art exhibit). Offering three response levels permitted use of the same response form for both these types of items. The second purpose accomplished by combining levels of response was to limit the number of items with highly skewed distributions, items to which 90 per cent or more of the students would give a common response.

Inter-item tetrachoric correlation coefficients were computed for the entire set of 198 items. Correlation matrices for 80 items at a time were then factored in a principal components analysis followed by a varimax rotation of the most salient factors. Plots of the eigenvalues of all the factors suggested that at least six and probably nine nonerror factors were present; these nine were rotated. The items that load on these nine factors are presented in Tables 3 through 11. The factor loadings are measures of the degree of relationship between the indicated item and the factor.

Table 3

Checklist of Events

Factor 1

Item No.	Item	Factor Loading
165.	Talked with an instructor about classwork.	.75
144.	Got help from an instructor outside class.	.74
118.	Discussed a paper or other issue at length with an instructor.	.74
217.	Argued in class with an instructor.	.57
166.	Talked casually with an instructor outside class.	.56
114.	Started a lively discussion in class.	.53
208.	Helped another student with studies.	.41
244.	Questioned an instructor about a grade.	.40
154.	Got into an interesting bull session.	.33
167.	Stayed late to finish a lab experiment.	.32
151.	Got help in a course from another student.	.32

Note: In Tables 3 through 11, all items not marked with an asterisk were dichotomized between the responses, "Not at all" and "Once or twice." For these items, then, one response category was "Not at all;" the other was, in effect, once or more. Items marked with an asterisk were dichotomized between the responses, "Once or twice" and "Three or more times." Categories for the asterisked items were therefore, in effect, seldom versus often.

The major element in Factor 1 is direct contact with an instructor, primarily over coursework but also informally outside class. A second element, but not as pronounced as the first, is concern with achievement in courses, as exemplified by helping other students and getting help from other students and by working late on a laboratory experiment. An element of social facility or an absence of diffidence is also present. Most of the items involve a direct exchange of views between two or more persons. One identifiable type or pattern of behavior, therefore, seems to consist of a concern with academic achievement accompanied by a readiness to get verbally involved with both faculty and students over academic issues. A cynical interpretation might lead to labeling this the apple-polishing factor, but items 208, 154, and 151 do not support this view of the factor. Factors 2 and 6 are also associated with studies but contrast with Factor 1 in having no element of involvement with faculty.

Table 4

Checklist of Events

Factor 2

Item No.	Item	Factor Loading
207.	Dragged behind in a course.	.64
209.	Did poorly on an exam.	.63
128.	Read an assignment without understanding it.	.62
134.	Found a question I didn't know on an exam.	.60
117.	Got left behind in a class lecture.	.58
157.	"Tied up" in an exam.	.55
135.	Got discouraged and talked it over with another student.	.50
151.	Got help in a course from another student.	.50
228.	Crammed for an exam.	.49
119.	Caught up in a course I'd been behind in.	.42

Factor 2 is associated with academic difficulty, but shows no indication of any contact with an instructor over the difficulty. Except for the last item in Table 4, Factor 2 seems pervaded by a feeling of helplessness. Item 165, "Talked with an instructor about coursework," has essentially a zero loading (0.04) on this factor in contrast to its high loading on Factor 1. The somewhat desperate feeling of academic helplessness suggested by Factor 2 does not lead students to get help from the faculty. Factors 1 and 2 together suggest that social facility rather than academic need lead to contact with faculty members.

Table 5

Checklist of Events

Factor 3

Item No.	Item	Factor Loading
225.	Got help from another student in a lab experiment.	.70
167.	Stayed late to finish a lab experiment.	.68
213.	Arrived late at class.	-.32
227.	Had a casual date fur a coke or movie.	-.40
142.	Missed a class because of commuting difficulties.	-.46
122.	Cut a class.	-.47
127.	Had a date with a nonstudent.	-.60

Factor 3 is an unexpected bipolar dimension with laboratory work at one end and dating nonstudents at the other. It makes sense if the items with negative loadings are more commonly associated with commuters than with residential students and if laboratory courses are more commonly taken by residential students than by commuters. Plausible as this may seem, though, factor scores on this factor did not differentiate commuters from residential students at the same college nor students at a residential liberal arts college from students at a commuter college. This factor therefore indicates a more general kind of orientation toward or away from academic concerns than one associated with residence on or away from the campus.

Table 6

Checklist of Events

Factor 4

Item No.	Item	Factor Loading
232.	Wrote a letter home.	.86
140.	Went to the student health center for treatment.	.48
212.	Wrote a letter to a friend of the opposite sex.	.43
239.	Studied past 1:00 a.m.	.43
170.	Attended a campus lecture or assembly.	.37
214.*	Had coffee, hamburger, or coke with other students.	-.31
172.	Argued with my parents.	-.68
235.*	Talked with one or both of my parents.	-.69

*See note at bottom of Table 3.

Factor 4 suggests a somewhat solitary pattern of behavior and perhaps some homesickness among residential students. Commuter students presumably do not write letters home, and residential students are less likely than commuters to have talked with or argued with their parents. The pattern is elaborated a bit, though, by the tendency to have visited the student health center and not to have had a coffee or coke break with other students. All the items in the factor except one reflect solitary activities, and that one, attending a campus lecture or assembly, may in effect be solitary.

Table 7

Checklist of Events

Factor 5

Item No.	Item	Factor Loading
169.	Worked on a student committee.	.83
126.	Worked with a student group on a major project.	.80
116.	Attended a meeting of student organization.	.76
137.	Presented a new idea to a student organization.	.68
237.	Worked with some other students on a class project.	.62
110.	Worked on a community service project.	.56
133.	Saw a play.	.40
170.	Attended a campus lecture or assembly.	.38
148.*	Met someone on campus I'd like to know better.	.38
147.*	Met a new acquaintance.	.35

*See note at bottom of Table 3.

Factor 5 indicates involvement in student activities and, to a small extent, a tendency to have made new acquaintances. The six items with the highest loadings on the factor all involve some form of organized group activity.

Table 8

Checklist of Events

Factor 6

Item No.	Item	Factor Loading
231.*	Reviewed class notes.	.69
115.*	Studied on a Saturday or Sunday morning.	.54
156.*	Got very interested in a class lecture.	.54
230.	Followed a planned schedule for studying.	.53
141.*	Talked with other students about coursework.	.43
147.*	Met a new acquaintance.	.43
158.	Rewrote some class notes.	.40
214.*	Had coffee, hamburger, or coke with other students.	.31
235.*	Talked with one or both of my parents.	.30
219.	Dozed during a class lecture.	-.34
121.	Turned in a paper late.	-.38

*See note at bottom of Table 3.

Most of the items associated with Factor 6 deal with some aspect of studying or other academically motivated behavior. Factor 1 and Factor 6 both center around academic behavior, but differ in that Factor 6 includes a number of elements of organized, self-initiated, study-related behavior that may be engaged in unilaterally. Factor 1 is almost exclusively concerned with student-instructor and student-student interaction, with a suggestion that the interpersonal interaction may be as important an element of that behavior as is the concern with studies.

Items 147, 214, and 235, dealing with informal relations with other students and parents, are difficult to fit with the rest of the items. They contrast with the faculty involvement of Factor 1 and may indicate a separation between socializing and studying in the behavior identified by Factor 6. Students who follow this pattern may be conscientious, effective students who leave intellectual concerns out of their social activity. Lively class discussions and interesting bull sessions are not a part of this behavioral dimension as they are of Factor 1.

Table 9

Checklist of Events

Factor 7

Item No.	Item	Factor Loading
218.*	Fooled around.	.68
211.	Argued with one or more other students.	.63
143.*	Got bored during a lecture.	.54
120.	Chatted with the student next to me in class.	.49
141.*	Talked with other students about coursework.	.46
154.	Got into an interesting bull session.	.45
217.	Argued in class with an instructor.	.45
219.	Dozed during a class lecture.	.42
130.	Got irritated during a class discussion.	.40
214.*	Had coffee, hamburger, or coke with other students.	.35
207.	Dropped behind in a course.	.31
124.*	Missed a meal.	.31
122.	Cut a class.	.31
230.	Followed a planned schedule for studying.	-.38

*See note at bottom of Table 3.

Factor 7 suggests a lively, mildly irresponsible student who has little interest in classes or studying. He spends his time fooling around, arguing with students and instructors, talking, socializing, but doing little academically.

The pattern of behavior associated with Factor 7 may be similar to a type of vocationalism described by Clark and Trow (1960). They describe a kind of student who is oriented solely toward a diploma, but not toward one of the usual vocational college fields--business, engineering, and education. He is in college for vocational preparation, but in only a vague, confused way. He questions both the value of specific vocational training and that of a general liberal arts program. "The traditional justifications of liberal education sound hollow to them; the vocational courses irrelevant; the collegiate round expensive and trivial. Small wonder that college comes to seem an obstacle rather than an opportunity, an arbitrary, extended test of motivation, endurance, and general intelligence leading to a qualifying certificate and a better job." (Clark & Trow, 1960, p. 16). The common element in this description and in Factor 7 is the absence of purpose. While absence of purpose can be characteristic of several types of students, the association of the behavior identified by Factor 7 with Clark and Trow's anomalous vocational student is an interesting possibility.

Factor 8 is clearly identifiable as a dimension of esthetic, literary, or artistic behavior. Several items related to musical and dramatic interests, however, did not load on this factor. It seems limited to graphic art and literature and a mild rejection of athletics. Like Factor 4, it includes only solitary activities.

Table 10

Checklist of Events - Factor 8

Item No.	Item	Factor Loading
168.	Worked on a painting or sculpture.	.74
131.	Went to an art exhibit.	.58
146.	Read poetry not assigned in class.	.56
125.	Wrote a poem.	.52
223.	Spent an hour or more reading unrequired fiction.	.32
220.	Wrote a short story.	.32
138.	Bought a book not required for a course.	.30
149.	Watched an athletic event.	-.31

Table 11

Checklist of Events - Factor 9

Item No.	Item	Factor Loading
171.	Spent an hour or more reading course-related but unrequired material.	.66
123.	Read unassigned material related to a course.	.59
240.	Missed a meal because of studies.	.49
223.	Spent an hour or more reading unrequired fiction.	.48
138.	Bought a book not required for a course.	.47
239.	Studied past 1:00 a.m.	.47
124.	Missed a meal.	.46
155.	Read most of the stories or articles in a magazine.	.43
213.	Arrived late at class.	.33
152.	Looked up material in the library for class.	.32
219.	Dozed during class.	.31
121.	Turned in a paper late.	.30

Factor 9 may include a substantial amount of error variance. While four of the first five items associated with it have an obvious relationship with each other, all involving unassigned reading, the association with some of the other items is not clear. The factor might be interpreted as a kind of erratic, undisciplined academic behavior, the reverse of the behavior associated with Factor 6. The unrequired nature of the reading may fit well with late studying, missed meals, dozing in class, and papers turned in late. It also has a flavor of isolation about it, all the items being unilateral activities. Yet whether an interpretation should be attempted at all is open to question. In summary, the nine factors describe a variety of behavioral dimensions derived from statements of discrete events in which students actually engaged. The items, descriptions of possible instances of behavior, were written to tap four domains of college behavior--academic behavior, organized group activities, informal interpersonal activities, and solitary activities. These are reflected somewhat in the factors that emerged.

Four factors represent dimensions of academic behavior. One indicates interested, direct involvement with both faculty and students in discussions relevant to courses. The second is associated with rather intense academic difficulty. Another represents conscientious, well-organized, self-initiated studying. The fourth, if Factor 9 can be reasonably interpreted as a dimension of academic behavior, describes erratic, disorganized, haphazard attention to studies.

One factor is clearly associated with organized group activities, and another equally obviously represents artistic and literary concerns. The other three of the nine are less clearcut. One suggests students uninterested in academic or intellectual concerns and without clear vocational goals who aimlessly while away their time in college. Another factor suggests the somewhat homesick student who has not yet established a circle of friends at college. The final factor seems to identify a pattern of behavior oriented toward interests off the campus.

Behavioral intentions

On the Behavioral Differential the students indicated the probable ways they would respond--their behavioral intentions--in a variety of situations. The plot of eigenvalues for the 50 variables (10 situations and 5 kinds of response to each situation) indicated three distinct nonerror factors and possibly two more. Earlier versions of the instrument had produced four or five interpretable factors, so five were rotated to the varimax criterion. Interpretation of the fifth factor is questionable, so four are presented. The factor matrix of the five rotated factors is found in Table A of Appendix F.

The four factors interpreted all deal with the individual's mode of response to the external world, with his sense of his own position relative to other people collectively and individually. They suggest (1) identification with adult authority and acceptance of adult standards, (2) impulsive social involvement and active commitment to a course of action, (3) cautious self-interest in academic areas, and (4) withdrawal from social stress. (Roman numerals were assigned to the four factors of the Behavioral Differential to distinguish them from the nine factors of the Checklist of Events, which were given Arabic numerals.)

Each of the ten situations provided an opportunity for some form of action by the students, but options to defer action or to withdraw with no positive action were offered. The situations included three concerned primarily with academic matters, three that were unstructured situations involving a group of other students, two that centered around organized student activities, and two that involved either solitary behavior or a relationship with only one other student. The four interpreted factors identify characteristic ways students respond to the types of situations presented. While some tendency appears for the major loadings on a factor to come largely from one situation, the situations are spread broadly enough among the factors to suggest that the identified patterns of behavior, or of behavioral intentions, are not specific to the particular situations described.

In Tables 12 through 15 are found the major factor loadings for the four factors. The first suggests both identification with adult authority and dependence on adults in almost every type of situation offered.

Ten of the 13 variables related to the first factor, shown in Table 12, consist of seeking adult help when in difficulty or adopting the adult or society's frame of reference. One of the others--volunteering to go with an instructor to hear off-campus speakers--is not inconsistent with the acceptance of an adult frame of reference. Only two--thinking things through alone after a low examination grade or talking with a close friend in the same situation--do not involve adults or adult standards.

The second factor (Table 13) deals with active involvement in a student protest to the administration, some impulsiveness, and a readiness to commit one's self to active participation in a variety of activities.

Table 12

Behavioral Differential Factor I

Identification with Adult Authority

Situation	Response	Factor Loading
J. Friend is upset, missing classes, may drop out.	52. Suggest help from adult.	.61
J. Friend is upset, missing classes, may drop out.	53. Seek adult help for him.	.56
G. Unexpected low grade in exam.	40. Talk with instructor	.56
I. Invitation to join in a disapproved activity.	50. Try to dissuade the others.	.52
G. Unexpected low grade in exam.	39. Talk with parents.	.51
J. Friend is upset, missing classes, may drop out.	54. Convince him to study more, stay in college.	.47
G. Unexpected low grade in exam.	37. Think things through alone.	.46
H. Frustrating tutoring project.	46. Give pep talk to tutees.	.40
D. Horseplay in the student union.	22. Try to settle things down.	.38
H. Frustrating tutoring project.	43. Ask for help from other tutors.	.36
A. Invitation from instructor to hear an off-campus speaker.	8. Volunteer to go.	.33
B. Administrative action against student publication.	12. Agree with administration's position.	.33
G. Unexpected low grade in exam.	41. Talk with close friend	.32

Table 13

Behavioral Differential Factor II

Active Commitment

Situation		Response		Factor Loading
B.	Administrative action against a student publication.	15.	Form a student protest group.	.60
B.	Administrative action against a student publication.	16.	Sign a petition of protest.	.58
B.	Administrative action against a student publication.	13.	Picket the administration building.	.57
C.	Open weekend coming up.	17.	Follow an impulse to go out of town.	.48
E.	Instructor offers opportunity for independent study.	29.	Volunteer immediately.	.37
I.	Invitation to join in a disapproved activity.	49.	Expectantly join in.	.34
C.	Open weekend coming up.	20.	Try to meet an interesting date.	.34
I.	Invitation to join in a disapproved activity.	47.	Join in qualifiedly.	.32
E.	Instructor offers opportunity for independent study.	28.	Reject offer; stay with class.	-.37
B.	Administration action against a student publication.	12.	Agree with the administration's position.	-.39
B.	Administrative action against a student publication.	14.	Remain uninvolved.	-.48

The three variables with the highest factor loadings all consist of taking a strong, positive action in opposition to an action of the administration. The behavior most strongly associated with the negative end of the factor is remaining uninvolved, which is more closely related to the factor than is agreeing with the administration's position. The students whose behavior would fall at the positive end of the dimension seem to place slightly more emphasis on the importance of being involved than on the merits of the particular issue at hand.

Action in an organized effort with other students is the form of behavior most clearly associated with this factor, but other forms are present. They include self-initiated venturesomeness when an uncommitted weekend is approaching, immediate volunteering for a class-related trip, and willingness to join other students in a questionable escapade. A pattern of behavior is indicated, therefore, that is common to a wide range of situations and circumstances.

The third factor (Table 14) has a flavor of caution that makes it seem inversely related to the second. Yet only three variables are common to both factors with loadings more than negligibly different from zero. These three all represent an academic situation. After an instructor's invitation to a few students to engage in independent study, rejection of the offer loads positively on Factor III (0.32) and negatively on Factor II (-0.37), while immediate volunteering loads negatively on Factor III (-0.29) and positively on Factor II (0.37). Similarly, immediate volunteering to go with an instructor to hear an off-campus speaker loads negatively on Factor III (-0.31) and positively on Factor II (0.28). Caution in the nonacademic areas of Factor II--the student protest, the uncommitted weekend, the disapproved activity--do not appear in Factor III. It seems limited instead to a calculated self-interest in doing whatever is likely to produce grades if no departure from customary procedures is involved.

Table 14

Behavioral Differential Factor III

Cautious Academic Self-interest

Situation		Response		Factor Loading
E.	Instructor offers opportunity for independent study.	30.	Ask about effect on grade.	.63
E.	Instructor offers opportunity for independent study.	31.	Talk with other students before deciding.	.56
A.	Invitation from instructor to hear off-campus speaker.	7.	Ask about class credit.	.44
E.	Instructor offers opportunity for independent study.	27.	Seek more information from instructor.	.43
D.	Horseplay in the student union.	25.	Enjoy it as an uninvolved spectator.	.35
E.	Instructor offers opportunity for independent study.	28.	Reject offer; stay with class.	.32
J.	Friend is upset; missing classes; may drop out.	54.	Convince him to study more, stay in school.	.32
A.	Invitation from instructor to hear off-campus speaker.	8.	Volunteer to go.	-.31

Factor II describes a tendency toward impulsive commitment to some positive course of action as opposed to caution, restraint, and a preference not to become involved. Factor III is almost totally associated with caution and lack of involvement. These two factors are essentially unrelated, however. The correlation between students' factor scores on these two factors is -0.13, negligibly different from zero. The absence of a relationship implies that the same students may be cautious, prudent, and concerned over their own self-interest in academic affairs, but impulsive, contentious, and actively involved in other areas of activity, and the reverse.

The fourth factor (Table 15) deals exclusively with peer-related behavior of a passive, uninvolved nature. Conflict is avoided, as is anything perceived as interference in another person's affairs. Disagreement in a student bull session is circumvented; horseplay is ignored or avoided; a friend in trouble is left alone.

Table 15

Behavior Differential Factor IV

Disengagement

Situation	Response	Factor Loading
F. Strong disagreement with an issue in a student bull session.	36. Listen without expressing own views.	.57
F. Strong disagreement with an issue in a student bull session.	32. Leave the discussion.	.54
D. Horseplay in the student union.	23. Leave the scene.	.53
F. Strong disagreement with an issue in a student bull session.	35. Try to change the situation.	.50
J. Friend is upset; missing classes; may drop out.	55. Don't interfere.	.49
D. Horseplay in the student union.	26. Ignore it.	.45
A. Invitation from instructor to hear off-campus speaker.	9. Go separately with friends.	.36

Factors I and II suggest an active, positive approach to whatever situation is presented. They differ in their frame of reference, though, Factor I reflecting adult standards and Factor II suggesting a strong orientation toward the peer culture. Factors III and IV represent passive forms of behavior, Factor III concerned primarily with academic performance, with satisfaction of adult-approved standards, and Factor IV involving peer relationships.

The four factors might be represented on two dimensions, one a dimension of active versus passive behavior and the other representing a peer versus adult frame of reference. The parsimony of this representation is tempting, but its applicability to other data of different kinds should be established before much credence is given it. It may be found to be no more than a forced interpretation of the present data, not capable of broader generalization.

The nine factors found in the actual behavior reported on the Checklist of Events suggests that descriptions of college student behavior in terms of an active-passive mode and peer-adult orientations may be useful, these two dimensions having some generality. But only a very small segment of college behavior would be accounted for. Factor I of the Checklist of Events describes an active rather than passive mode, but its heavy loadings for items associated with instructor-oriented behavior may not represent the uncritical receptiveness to adult standards that Factor I of the Behavioral Differential suggests. Factor 5 of the Checklist is clearly active and clearly peer-oriented. The other Checklist factors do not lend themselves to an active-passive, peer-adult interpretation. The items of Factor 7 include all four elements--active and passive modes of behavior and peer and adult orientations. Factors 8 and 9 include self-oriented activities exclusively and are completely unrelated to the peer-adult dimension.

Emotional responses to college situations

The ten situations to which students responded by checking how they would feel elicited widely varied responses but reasonably uniform factor patterns. An instructor's invitation to accompany him to hear an off-campus speaker produced responses of calm, pleased, relaxed, and tolerant. Frustration in a tutoring project or censorship of a student publication, however, produced responses of anger and irritation. Other such differences appeared, as would be expected, but the factor structures were fairly similar, the same combinations of attitudes into factors appearing.

Four interpretable factors appeared in all the situations. The bipolar terms that define each factor are listed in Table 16.

Table 16

Attitudinal Differential Factors

I	II	III	IV
Venturesome-Cautious	Relaxed-Tense	Playful-Serious	Tolerant-Critical
Decisive-Hesitant	Calm-Angry	Bored-Excited	Pleased-Irritated
Confident-Apprehensive	Competent-Inadequate		
Involved-Detached			

Types of students indicated by behavioral intentions

The most commonly used form of factor analysis (R analysis) starts from relationships among variables. Several factors, fewer in number than the variables, are then found that can account for most of the information in the original variables. Thus the 4 factors of the Behavioral Differential account for much of the information in the 50 original variables. A student's position on Factor I, for example, indicates how he can be expected to respond when a friend is upset, when he has unexpectedly done poorly in an exam, or when he has been invited to join in a questionable activity. A large number of instances of behavior are thus reduced to a smaller, more manageable number of general types of behavior.

A similar procedure can be applied to identify types of students who behave in similar ways. This form of factor analysis (Q analysis) starts from relationships among the individual students instead of from relationships among the 50 variables. This is intuitively a more satisfying way of identifying student types than those more commonly used. Most classification procedures start with a limited number of predetermined dimensions of classification (e.g., aptitude, social class, introversion-extroversion, impulsivity) divided into categories to which students are then assigned. This kind of procedure is appropriate when interest centers on the variable of classification. As a method of typing students, though, it is inadequate in being limited to a few variables. Students placed in different categories on a limited number of variables may, as complete individuals, show far more similarities than their positions in separate categories would suggest. The Q mode of factor analysis permits the grouping or classification of students according to their similarity with respect to a large number of variables, leading to the identification of types that are substantially distinct from each other. In the present study, the students' responses to the 50 items or variables of the Behavioral Differential were the basis for computing correlation coefficients between students, which were then factored to identify types of students.

In the procedure used (Manson & Imbrie, 1964) the initial factor matrix was rotated orthogonally to the varimax criterion. Students who occupied extreme positions on the orthogonal factors were then used as reference points for further rotations. Each factor was placed to run through a point occupied by one of the extreme students. The final factors were therefore not required to be orthogonal--that is, independent of each other--but were not highly related because the selection of students used as reference points was based on factors that were orthogonal. The factors represent types of students in a literal sense, types associated with several prototype students who differ widely from each other in the ways they say they would behave in various college-related situations. The identification of the prototype students as those occupying extreme positions on the original factors assures that the qualities embodied in the prototype students are those most salient in the group as a whole and are not peculiar to one of a few students.

Three subsamples of 100 students each were analyzed as outlined above. Each subsample was randomly selected within sex and college so that both sexes and the three colleges were equally represented within a subsample. Types of students associated with a particular college or sex therefore had an opportunity to appear.

The nature of each student factor or student type was determined by the characteristics of the 10 students with the highest loadings on each factor as well as by the characteristics of the prototype student who determined the position to which the factor was rotated. The characteristics examined were sex, college, and factor scores on the R-mode factors of the Behavioral and Attitudinal Differentials and the Checklist of Events.

Six similar factors, presented in Table 17, appeared in at least two of the three analyses. A few additional factors appeared, but not in more than one of the analyses. Three of the factors had enough similarity in the characteristics of the students associated with these factors that they are listed together in

Table 17 as subfactors. Yet each of the three appeared separately with one or both of the other two in the three Q analyses. They therefore represent distinct types of students whose total patterns of responses on the Behavioral Differential differ substantially. For this reason, the similarities in the subtypes of Table 17 are not as important as the differences.

Table 17

Types of Students

Q Analysis of Behavioral Differential

	Behavioral Differential Factor Scores				Attitudinal Differential Factor Scores (Situation B)			
Student Type	I	II	III	IV	I	II	III	IV
1a	Low	High		Low	High			Low
1b		High		Low	High			Low
1c	Low		Low	Low	High			Low
2	Low			High			High	
3		Low					High	High
4	High							

The entries of Table 17 indicate characteristic scores of students of each type on the R-mode factors of the Behavioral and Attitudinal Differentials. Identifiable patterns on the Checklist of Events corresponding to these types did not appear. Correlations between factor scores of the Behavioral Differential and of the Checklist of Events were small, suggesting two possible conclusions. Either statements of probable behavior in hypothetical situations are not highly related to actual behavior, or the behavioral domains tapped by the two instruments are not sufficiently similar to provide higher relationships.

Common elements in the three subtypes labeled 1a, 1b, and 1c in Table 17 are low scores (high negative scores) on Factor IV of the Behavioral Differential and low scores on Factors I and II of the Attitudinal Differential as it applied to the situation involving administrative censorship of a student publication. Students in all three of these subtypes would not withdraw from a bull session in which their views were questioned, and they would feel irritated, critical, angry, venturesome, decisive, and confident in a dispute with the administration.

In addition to the qualities of all three subtypes of type I, students of subtype 1a reject adult help even when in trouble (BD Factor I) and actively protest against a disapproved action of the administration (BD Factor II). Students of subtype 1b also actively join in a protest against the administration (BD Factor II), but do not reject adult help or an adult frame of reference. In contrast to the students of subtype 1a, those of subtype 1b are selective in their disputes with adults or with authority; they do not cut themselves off from adult help or from other kinds of involvement with adults. Students of subtype 1c reject adult help and adult standards but might not actively join in a protest against the administration. They would not seek more information from the instructor when offered an opportunity for independent study.

Students in all three of these subtypes are actively involved with other students, and all would feel irritation, anger, venturesomeness, and confidence if administration were to censor a student publication. Subtype 1a would actively protest the administration's action but also seems indiscriminately to reject any involvement with adults that is not competitive. Subtype 1b would actively protest the administrative action but does not necessarily reject other adult actions or a positive involvement with adults. Subtype 1c would not act on the feelings of irritation at the administrative action and seems unwilling to enter into any kind of activity with adults. Thus students of subtype 1a are actively rebellious; those of subtype 1b are more mature and selective in their actions; and subtype 1c students tend to avoid all involvement with adults but to accept involvement with other students.

A second type of student, Type 2, is similar to subtypes 1a and 1c in being characterized by low factor scores on the first factor of the Behavioral Differential. Students of this type, as of subtypes 1a and 1c, reject adult help and adult standards. They contrast with students of subtypes 1a and 1c by scoring high on the fourth factor of the Behavioral Differential, indicating reluctance to become involved with other students in uncomfortable situations. They would leave an argumentative bull session or a horseplay episode. They would not offer help or comfort to a friend in trouble for fear of intruding. High scores for these students on Factor III of the Attitudinal Differential as applied to the censorship situation indicate lack of seriousness or involvement, boredom, and unconcern.

All the identifiable characteristics of Type 2 students thus suggest withdrawal from any kind of mildly stressful interpersonal situation, whether with adults or other students. These students do not seek faculty or other adult help when in academic difficulty; they do not suggest adult help for an upset friend; they do not intervene on the side of adult standards when horseplay or some other form of disapproved activity occurs; they withdraw from a bull session in which their views are challenged; they remain uninvolved when a friend is in difficulty; they are unconcerned over a conflict between students and the administration.

The third type of student identified is in some respects the reverse of subtypes 1a and 1b. Their scores are low on Factor II of the Behavioral Differential and high on Factors III and IV of the Attitudinal Differential as applied to the censorship situation. These students are cautious, prudent, do not question adult standards or authority, do not act impulsively, and are not concerned with a student-administration conflict. This type seems to consist of cautious, responsible, reliable students. Level of personal involvement with either adults or students is not a distinguishing feature; it may be high or low. They do not withdraw from involvement as do the Type 2 students, but their involvement is likely to occur carefully and thoughtfully, not impulsively or spontaneously. Junior college students and women are overrepresented in this type; private college students and men are underrepresented.

The fourth type is characterized only by a strong sense of reliance on adults, acceptance of and adherence to socially approved forms of behavior, and the inclusion of more women than men.

In summary, six types of students, three of which were grouped as subtypes of a more general class, were identified by common responses to a variety of college-related situations. The first type consisted of active, venturesome, impulsive students, with one subtype actively rejecting adult standards, a second subtype protesting adult actions with which it disagrees but not rejecting adults otherwise, and a third subtype that withdraws from adults but not from students. Students of Type 2 are cautious, passive, uninvolved, and tend to withdraw from all mildly stressful social contact. Type 3 students are also cautious and prudent but conscientious and serious, not passive, without tendencies toward withdrawal. The fourth type of students are oriented toward adult standards and rely on adults for help when in difficulty.

As with the factors of the Checklist of Events, some justification may exist for describing these several student types in terms of two dimensions, one representing active versus passive behavior and the other an adult versus peer orientation. Yet that level of abstraction from the data would not accommodate some of the other distinctions among the types and would have a rather tenuous undergirding at best. The delineation of types is speculative when based on a single set of observations with one sample of students, even though a moderately large sample. Elaboration of the types and of the patterns of experiences observed in the present study through more sharply focused studies should precede any more confident interpretations of the present data.

Student perceptions of student patterns of behavior

The Student Type Indicator, described earlier, asked students to state the degree of similarity between all possible pairs of 18 hypothetical students. The hypothetical students were brief descriptions of idealized representatives of five student subcultures, three described by Trow (1962) and two representing somewhat different orientations to college. Each student subculture was represented by three hypothetical students. Three further hypothetical students were added. Their descriptions were intentionally ambiguous, including elements of both the academic and nonconformist subcultures.

Ratings of similarity for each pair of hypothetical students were made on a nine-point scale. From the total set of ratings of similarity made by all the subjects, scale values of similarity were calculated following Thurstone's law of categorical judgment (Torgerson, 1958, p. 238).

Scale values for the similarity of student pairs were treated as comparative interstudent distances, a low scale value representing a high degree of similarity and thus a low psychological distance in the hypothetical-student space. Comparative distances were converted into absolute distances by adding a constant to each value. The additive constant was determined according to Messick and Abelson's procedure (Torgerson, 1958, pp. 273-276). From the matrix of absolute interstudent distances a matrix was computed of the scalar products of pairs of vectors to each pair of hypothetical students from the centroid of the hypothetical-student space. Factoring this matrix of scalar products then gave the dimensionality of the hypothetical-student space, that is, the number of dimensions used by the sample of real students in assigning ratings of similarity to the pairs of hypothetical students.

The eighteen hypothetical students were constructed to represent five different types. Five dimensions were therefore expected to be required for the ratings of similarity. Overlap among the five types or the positioning of two or more types on a single dimension could be expected to reduce the number of dimensions required, but more than five seemed unlikely. The first five factors of the principal components factor matrix were therefore rotated to a varimax solution.

A plot of the eigenvalues for all eighteen factors indicated that three factors were clearly nonerror factors and that five might contain some true variance. Use of the beta statistic suggested by Stake, Beaird, and Sjogren (1962) also indicated at least three and perhaps five nonerror factors. Five factors did in fact prove to be interpretable and are described below. The major variables (hypothetical students) associated with each factor are shown in Tables 18-22. The complete factor matrix is shown in Table B of Appendix F.

Each factor represents a dimension along which the real students perceived similarities and differences among the hypothetical students. The five dimensions are bipolar and may more precisely be considered orientations toward college which students may espouse to varying degrees than types of students, although this is a relatively minor point. If the extreme of each dimension were to be considered representative of a type, ten types would result. This seems an unnecessarily forced conceptualization, and treating the five factors as continuous dimensions of orientation toward college is more defensible.

Tucker and Messick's form of inverse factor analysis (Tucker & Messick, 1963) indicated clearly that one global point of view accounted for all the variation across individual students in ratings of similarity. The five orientations to be described are those perceived rather uniformly by more than 500 freshman students in three widely different colleges. (The students at the fourth college did not complete the Student Type Indicator.)

Table 18

Student Type Indicator Factor I

Academic vs. Uncommitted Orientation

	Hypothetical Student	Factor Loading
4.	Pursues coursework further than required. (Academic)*	1.97
6.	Often hotly discusses issues raised in class. (Academic)	1.93
1.	Wants classwork to give him something useful in a job. (Vocational)	-1.80
12.	More involved with off-campus than with on-campus groups. (Identity seeking)	-1.90
18.	Questions the purpose of college. (Academic-Nonconformist)	-2.02

*In Tables 18 through 22 the subculture intended to be represented by each hypothetical student is indicated in parentheses.

The first factor, labeled Academic vs. Uncommitted Orientation, clearly identifies a dimension having at one end a strong inclination toward academic activity, identification with on-campus rather than off-campus groups, no questioning about the purpose of college, and rejection of vocational preparation as the major purpose of college. The other end of the dimension is associated with uncertainty about the purpose of college, involvement in off-campus rather than on-campus activities, and a desire for vocational preparation. The type of student who falls at the negative end of this dimension appears very much like the anomalous vocational student described by Clark and Trow (1960), picked up on Factor 7 of the Checklist of Events (Table 9), and identified most strongly by Factor V of the Student Type Indicator, to be described shortly.

The positive end of the academic orientation is very close to Clark and Trow's academic subculture. Trow's ascription to the academic subculture of a strong identification with faculty and institution is clearly apparent in the last two hypothetical students in Table 18. A strong characteristic of the academic orientation is involvement with on-campus rather than off-campus groups and little if any questioning of the purpose of college.

Clark and Trow's nonconformist subculture includes a concern with intellectual activity, which seems to overlap with the academic subculture, providing an area of ambiguity between the two. The nonconformist's intellectual orientation is clearly distinguished from the academic orientation by the subjects of this study, providing considerable support for Clark and Trow's characterization of the academic subculture. Their nonconformist subculture, however, is not perceived by the students at the three colleges of the present study as representative of a single type of student. Clark and Trow, in fact, talk of several kinds of nonconformist student.

The second factor, labeled Autonomous vs. Traditional Orientation (Table 19), has some elements of Clark and Trow's nonconformist subculture but not the intellectual element, which appears on a different dimension of student similarities.

The autonomous-traditional orientation includes, at the traditional end, all the elements of status seeking included among the hypothetical students. The three hypothetical students that define the autonomous end of the dimension have in common a concern with self-dependence and rejection of external standards. The traditional end of the dimension includes a desire to be involved in group activities, to be accorded a position of status, and adherence to tradition. The characteristics of the dimension as a whole rather than one end or the other lead to its identification as one characterized by autonomy at one end and a traditional orientation at the other.

Table 19

Student Type Indicator Factor II

Autonomous vs. Traditional Orientation

	Hypothetical Student	Factor Loading
7.	Independent of group standards and pressures. (Nonconformist)	2.07
9.	Rejects custom and tradition. (Nonconformist)	1.32
12.	More involved with off-campus than with on-campus groups. (Identity seeking)	1.23
13.	Major concern is association with important persons. (Status seeking)	-1.39
14.	Wants to be recognized as a leader by other students. (Status seeking)	-1.71
15.	Values Homecoming Week, Spring Carnival, etc. (Status Seeking)	-3.42

The status seeking students have elements in common with Clark and Trow's collegiate subculture, particularly as embodied in Hypothetical Student #15, the one who looks on Homecoming Week, the Spring Carnival and similar events as high points of the year. The appearance of nonconformists and status seekers on the same dimension--one independent of either the Academic dimension or the Intellectual dimension, to be described shortly--suggests that the students of the present study see more relationship between Clark and Trow's nonconformist and collegiate subcultures. Further, this is an aspect of the nonconformist subculture clearly differentiated from the independent, intellectually oriented students.

The autonomy of the autonomous-traditional dimension is associated primarily with interpersonal relations and rejection of group standards of behavior and group-oriented recreational activities. Autonomy in relations between individual and individual, as opposed to that between individual and group, are not a part of this dimension. Intellectual independence is also not a part of this dimension. The students making the judgments of similarity were apparently quite discriminating in their views of student autonomy and nonconformity, clearly distinguishing several kinds.

The Vocational vs. Social Protest Orientation (Table 20) follows closely at one end the vocational subculture of Clark and Trow, but some elaboration is provided. Students at the vocational end of this dimension see college primarily as preparation for an occupation. They are also characterized, as are students oriented academically, by failure to question the purpose of college. They and students of the academic orientation are apparently firm in their convictions about the purpose of college, but their convictions differ. The vocationally oriented students are also seen as rejecting social protest or social change.

Another element of the Clark-Trow nonconformist subculture is therefore picked up at the opposite end of the dimension that has vocationalism at one end.

Table 20

Student Type Indicator Factor III

Vocational vs. Social Protest Orientation

	Hypothetical Student	Factor Loading
2.	Major purpose in college is occupational preparation. (Vocational)	2.70
3.	Wants good grades because employers want them. (Vocational)	2.11
1.	Wants classwork to give him something useful in a job. (Vocational)	1.58
18.	Questions the purpose of college. (Academic-Nonconformist)	-1.46
8.	Involved in social concerns and protests; seeks and supports change. (Nonconformist)	-2.04

The fourth factor, Intellectual vs. Conformist Orientation (Table 21) departs from the Clark-Trow formulation in two important ways. First, it represents a clear separation of the independent, self motivated, intellectually oriented student from the academically oriented student, who is more dependent on direction from the faculty and who identifies strongly with the faculty and the institution. Second, it picks up elements of the nonconformist, status seeking, and vocational subcultures.

Table 21

Student Type Indicator Factor IV

Intellectual vs. Conformist Orientation

	Hypothetical Student	Factor Loading
17.	Concerned with esthetics. (Academic-Nonconformist)	2.20
5.	More interested in ideas than grades. (Academic)	2.04
16.	Neglects routine classwork because of interest in ideas. (Academic-Nonconformist)	1.91
14.	Wants to be recognized as a leader by other students. (Status seeking)	-1.46
13.	Major concern is association with important persons. (Status seeking)	-1.73
3.	Wants good grades because employers want them. (Vocational)	-2.14

The conformist end of the intellectual-conformist dimension (Table 21) is similar in some respectsto the traditional end of the autonomous-traditional dimension. These two dimensions can best be compared in Table B of Appendix F. The conformist on the intellectual-conformist dimension and the traditionalist on the autonomous-traditional dimension both want recognition as a leader and both want to associate with important people. The conformist, however, wants to please potential employers and wants his classwork to be useful in a job, both unrelated to the traditional orientation. The traditionalist, on the other hand, is very concerned with collegiate activities--Homecoming Week, Spring Carnival, and others--a concern unrelated to the conformist orientation. The conformist is therefore more vocationally oriented, the traditionalist more socially oriented.

The major distinctions between these two dimensions, though, are in the other ends of each--the autonomous student is independent of group standards, rejects custom and tradition, and is more involved with off-campus than with on-campus groups. Intellectual concerns are not part of either end of this dimension. Self-dependence as opposed to involvement with and dependence on others and on traditional values is the major aspect of the dimension. In contrast, intellectuality is a major element of the intellectual-conformist orientation. The intellectual student is primarily concerned with ideas and with esthetics on his own terms, a concern rejected by the conformist students. Rejection of a point of view may seem inappropriate to a label of conformist, but the intellectual self-reliance of items 5 and 16 make it understandable. The conformist students subordinate the pursuit of ideas to the completion of assigned classwork and the pursuit of grades.

The fifth factor (Table 22) is somewhat less readily interpretable than the other four, but makes sense partly in terms of one type of vocationalism described by Clark and Trow (1960, p. 16). They place in the vocational subculture a type of student not oriented toward any particular occupation, but only toward a college degree. These students find little value in a college education as either general educational development or as preparation for any specific occupational goal. Yet in a vague way they consider a degree important occupationally, a passport to a better but undefined job. They also reject the "collegiate" activities as expensive and trivial. College for these students is a hurdle to be got over in an uninteresting, wearing struggle toward a higher place in the world.

Table 22

Student Type Indicator Factor V

Undirected vs. Self-centered Orientation

	Hypothetical Student	Factor Loading
9.	Rejects custom and tradition. (Nonconformist)	2.34
1.	Wants classwork to give him something useful in a job. (Vocational)	1.78
18.	Questions the purpose of college. (Academic-Nonconformist)	1.32
17.	Concerned with esthetics. (Academic-Nonconformist)	-1.29
13.	Major concern is association with important persons. (Status seeking)	-1.33
14.	Wants to be recognized as a leader by other students. (Status seeking)	-1.39
11.	Major concern is understanding self. (Identity seeking)	-1.69

If Factor IV, the undirected vs. self-centered orientation, is considered as a whole, the anomalous vocational student described above--the vocational student not directed toward any specific vocation--seems to be identified. The student at the positive end of this dimension rejects custom and tradition, wonders about the purpose of college, is not searching for self-understanding and apparently sees little importance in it, is not interested in recognition as a leader or in personal status, and is not concerned with esthetic values. The only reason he can find for being in college is that the classwork might be useful in a job. Yet the other two elements of vocationalism that could have appeared on the dimension--occupational preparation specifically and desire for good grades to please potential employers--do not appear. He seems to be in college because of a vague feeling that college is a good thing, but without any real conviction that it is. He is undirected and uncertain.

The other end of the dimension includes some elements of status seeking, but the major element is a concern with self-understanding. If the elements of status seeking are considered aspects of self-aggrandizement, self-centeredness appears as the distinguishing feature of this end of the dimension. The dimension runs, then, from self-centeredness to an uncertain sense of lack of direction.

In summary, the five dimensions used by the students of the study in their perceptions of similarity among 18 hypothetical students were (1) academic involvement with the faculty and institution versus lack of academic commitment, (2) independance from group pressures versus acceptance of group standards and traditional college student values, (3) orientation toward vocational preparation versus social concern, (4) independent, self-directed intellectual concern versus conformity, and (5) lack of direction versus self-centeredness. These dimensions differ in several ways from those that would be expected from the Clark-Trow categories of students that were built into the set of hypothetical students. Two results of the present study are the distinction made between the academic and intellectually oriented students and the breakup of the Clark-Trow nonconformist subculture into several independent types of nonconformity involving intellectual, vocational, and interpersonal areas.

The intellectually involved student whose major interests are in ideas and in their esthetic expression, who subordinates social status and the satisfying of potential employer demands to the development of intellectual capabilities, is seen by the students in the present study as someone quite different from the student who is deeply involved in his classwork, pursuing it diligently, with no question as to the purpose of college. A key distinction between the academic and intellectual orientations as they are defined in the present study is that between an involvement with coursework and an involvement with ideas and esthetics. Descriptions of three of the five hypothetical students that define the academic orientation include references to coursework or classroom activities; nowhere is there a mention of ideas. The descriptions of the hypothetical students defining the intellectual orientation include two that refer to ideas and one that refers to esthetic interests. The only reference to classroom activities is a negative one. Studies at the Institute for Personality Assessment and Research in Berkeley suggest that the most creative scholars may come from the intellectually rather than academically oriented students (MacKinnon, 1960). The academic orientation seems associated with utilitarianism, external direction, and acceptance of goals established by others.

Whatever the respective merits of these two approaches to college--and both have merits--they are perceived by students as clearly distinct from each other. The presumption seems sound that these two orientations identify two distinguishable types of college students. They are more than purely conceptual distinctions. If this is the case, corresponding distinctions should be made in college programs. Disappointment of faculty members in the effectiveness of honors programs, for example, may be partly the result of expecting similar responses to an honors program from academically oriented and intellectually oriented students. Conflicting responses may also be expected from these two types of students in some of the new experimental colleges, or in any college, if faculty expectations involve one type or the other and both types of students are present.

Clark and Trow's academic subculture and Pace's scholarship environment both seem closely analogous to the academic orientation of the present study. Yet their classificatory schemes do not provide adequately for the intellectual orientation. Clark and Trow place it in the nonconformist subculture, where it is undifferentiated from social or vocational nonconformity. Pace's dimension of awareness in college environments (Pace, 1963) is similar in some respects to the intellectual orientation, but has less of the flavor of independent, self-directed intellectuality.

Clark and Trow's nonconformist subculture has at best represented a small minority, perhaps 5 per cent of college students (Peterson, 1965). The present results make the nonconformist subculture as a distinct entity seem little more than a convenience for conceptual elegance, accounting for one of the four cells in the interaction of two dichotomous variables (Clark & Trow, 1960; Trow, 1962). Students seem not to perceive the nonconformist subculture as an entity in itself, but perceive its various elements--intellectual, vocational, interpersonal, and perhaps others untapped in the present study--as parts of other patterns of behavior.

Patterns of Behavior Associated with College, Sex, Social Class, and College Residence

Classification of students by sex, social class, whether a commuter or residential student, and according to the particular college or type of college attended have often been found associated with other characteristics of college students (e.g., Farwell, Warren, & McConnell, 1962; Goldsen, Rosenberg, Williams, & Suchman, 1960; McConnell & Heist, 1962; Ellis, 1964). Classification of the students on these four variables was determined independently of the measures of behavior. Variation in behavior associated with these variables was examined through the analysis of variance procedures described earlier.

Residential status was examined in only one college and in that college was unrelated to any of the behavioral variables. For the other three variables of classification--college, social class and sex--none of the interactions, either three-way or two-way, reached the 0.05 level of significance. The effects of college, social class, and sex were unaffected by either of the other two variables and could therefore be examined singly.

With a sample of close to 500 students after those with missing data were eliminated, quite small differences in mean scores were statistically significant. Differences significant at the 0.01 level may account for only 2 or 3 per cent of the variation in that variable. For this reason, only those differences that reached the 0.01 level of significance are discussed.

College setting

The three colleges initially selected for the study were chosen to provide fairly wide variation in the type of college setting to which the students were exposed. Two are public colleges--one a four-year state college and one a public junior college. The third is a private, four-year college. Two are predominantly commuter colleges and one is predominantly residential. They range in size from 1,600 students to 12,000 students. With three colleges, each different in some major respect from the other two, the college settings cannot be considered representative of any larger group. They are treated simply as three different environments. Variations in behavior across the three colleges are therefore only indicative of ways behavior patterns may differ from college to college. Association of any pattern of behavior with any type of college is not possible with the data of the present study.

Of the four bases of classification against which variations in behavior were examined, college setting was the one on which differences were mostly commonly found. None of the differences, however, represented anything but a weak relationship between the variable of classification and the behavioral variable. Measures of the strength of the association found commonly gave values that would correspond to correlation coefficients on the order of 0.2, accounting for from 2 to 5 per cent of the variation in the variable of interest.

Factor scores of the Checklist of Events, on which students indicated activities in which they had recently engaged, provided measures that were not, on the whole, related to any of the four variables on which students were classified. The detailed activities listed on the Checklist and the factors into which they are organized are common to all three of the campuses of the study, to both sexes, to all social classes represented, and to commuter and residential students. The two exceptions, Factor 6 and Factor 7, were associated with the college setting. Tables 23 and 25 present the analysis of variance summaries for those two factors. Tables 24 and 26 present the means and standard deviations for the three colleges.

Factor 6 of the Checklist of Events represents a serious, conscientious approach to studies exemplified by studying on a weekend, following a planned schedule for studying, rewriting and reviewing class notes, and turning in assigned papers promptly. Junior college students score slightly but definitely lower than students at the other colleges on the factor associated with these items. The measure of association used, omega squared, indicates that approximately 3 per cent of the variation in scores on this factor is associated with college setting.

Table 23

Checklist of Events Factor Scores - Factor 6

Analysis of Variance Summary

Source of Variation	SS	df	MS	F	$F_{.99}$
A (College)	12.48	2	6.24	6.57	4.61
B (Social class)	3.39	2	1.70		
C (Sex)	0.68	1	0.68		
AB	0.25	4	0.06		
AC	1.13	2	0.56		
BC	0.06	2	0.03		
ABC	2.71	4	0.68		
Error	363.87	383	0.95		

Table 24

Checklist of Events Factor Scores - Factor 6

Means and Standard Deviations by College

	Junior College	State College	Private College
Mean	2.20	2.50	2.63
SD	0.98	0.95	0.97
N	143	164	94

Factor 7 is associated with a lively but erratic and irresponsible form of academic behavior that includes fooling around, arguing with students and instructors, getting bored and dozing in class, and not following a planned schedule for studying. Junior college students score slightly but definitely higher than students at the other colleges on this factor. As with Factor 6, 3 per cent of the variation in factor scores is associated with college setting. In spite of what would seem to be a high negative correlation between these two factors, their factor scores have a positive correlation coefficient of 0.14.

Table 25

Checklist of Events Factor Scores - Factor 7

Analysis of Variance Summary

Source of Variation	SS	df	MS	F	$F_{.99}$
A (College)	43.62	2	21.81	6.76	4.61
B (Social class)	1.21	2	0.60		
C (Sex)	6.33	1	6.33	1.96	6.63
AB	27.72	4	6.93	2.15	3.32
AC	0.15	2	0.08		
BC	7.09	2	3.54	1.10	4.61
ABC	0.31	4	0.08		
Error	1235.94	383	3.22		

Table 26

Checklist of Events Factor Scores - Factor 7

Means and Standard Deviations by College

	Junior College	State College	Private College
Mean	4.04	3.40	3.61
SD	1.90	1.76	1.70
N	143	164	94

The Behavioral Differential and Attitudinal Differential each provided four factors. The Attitudinal Differential factor scores are those for the situation in which the college administration has censored a student publication. This was the situation with the greatest representation on the factors of the Behavioral Differential and the one with apparently the greatest salience for the students.

Table 27

Behavioral Differential and Attitudinal Differential Factor Scores

Means and Standard Deviations by College

		BD - II	BD - III	BD - IV	AD - I	AD - IV
Junior College (N = 166)	Mean	-0.76	0.38	0.36	-0.30	0.80
	SD	3.34	2.49	2.67	2.14	3.49
State College (N = 213)	Mean	0.14	0.22	0.04	0.18	-0.33
	SD	2.97	2.56	2.51	2.23	3.84
Private College (N = 114)	Mean	0.96	-0.90	-0.54	0.56	-0.54
	SD	2.97	2.78	2.17	2.31	3.75

For the five factors shown in Table 27, the differences across colleges were statistically significant although, as stated above, the relationships were not strong. From 2 to 3 per cent of the variation in each factor is associated with college differences. In every case the state college was intermediate between the junior college and private college. Comparisons will therefore be described between these last two, with the intermediate position of the state college implied. The mean factor scores in Tables 27, 28, and 29 can be interpreted in detail by reference to the descriptions of the various factors in Tables 12-15. A general descriptive summary will be presented here.

Regardless of sex, students at the private college, in comparison with those at the junior college, are more venturesome, impulsive, ready to commit themselves to a course of action in a variety of situations, and more involved with other students, both collectively and as individuals. They are less cautious, prudent, and controlled, less apprehensive and less rigid in their concerns over grades and their own academic standing. When the administration has acted against a student publication they are more likely than the junior college students to feel irritated, critical, and angry, but also confident, decisive, serious, and excited. The junior college students remain unexcited, calm, restrained, and generally unconcerned.

The junior college students, more than the private college students, tend to remain uninvolved in a verbal disagreement with another student or actively to withdraw from it. They stay out of horseplay in the college union. The private college students are thus more active than the junior college students in student group activities and in out-of-the-ordinary academic activities. They are also more ready to become involved in a personal way with other individual students, to intervene with a troubled friend rather than to remain aloof for fear of intruding.

The private college students seem freer, less constricted, more capable of committing themselves to a variety of experiences, less anxious and apprehensive over their college activities, both academic and interpersonal, than the junior college students. They also come from higher social class backgrounds. Almost twice as many private college students as junior college students have fathers who are college graduates (42 per cent against 22 per cent), which may account to some extent for the lower feelings of apprehension about college experiences among the private college students. They are in familiar and comfortable surroundings, while the junior college students are still striving toward a not-yet-achieved social and economic standing. (See Table 2 for social class comparisons.)

Social class

The greater willingness of the private college students to commit themselves to an involvement with other people appears also in the low scores on Factor IV of students in the highest social class. Factor scores on the Checklist of Events and the Attitudinal Differential were not related to social class.

Table 28

Behavioral Differential Factor Scores

Means and Standard Deviations by Social Class

Social Class		Factor IV	
	N	Mean	SD
1 (High)	97	-0.69	2.31
2	111	0.13	2.53
3	108	0.61	2.57
4	95	-0.20	2.51
5 (Low)	82	0.13	2.51

High scores on Factor IV of the Behavioral Differential, inversely related to social class, are associated with reluctance to enter a disputatious bull session, to join in some horseplay, or to offer help to an upset friend. The highest social class differs significantly from the other four combined, which do not differ among themselves. (For a student to be assigned to the highest category, his father's occupation must be professional or managerial, and both parents will probably have attended college.)

The use of college as a path for upward social and economic mobility has been widely discussed, but not always with agreement as to its importance or effectiveness (Anderson, 1961; Clark, 1961; Havighurst, 1961; Trow, 1959; Turner, 1961). Ellis (1964) has demonstrated some of the specific difficulties faced in college by lower class students. The differences just described indicate some consequences for college behavior of social class membership, but more differences of style or mode of behavior than of accomplishment or effectiveness, as were those described by Ellis. These differences, too, distinguish upper class students from all others rather than lower class students from the others, as was true in Ellis's study.

The greater venturesomeness and lower level of apprehension described above are associated with both college setting and social class, which are themselves related. Yet no interaction was found between social class and college. Social class and college setting are independent of each other in their effects on the patterns of behavior indicated by Factor IV of the Behavioral Differential. Their effects are therefore additive, together accounting for about 6 per cent of the variation in Factor IV.

Sex

Three of the four factors on the Behavioral Differential and none from the Attitudinal Differential or Checklist of Events showed differences by sex, but the associations were again weak. From 2 to 4 per cent of the variation in behavior described by these three factors can be attributed to sex differences.

Table 29

Behavioral Differential Factor Scores

Means and Standard Deviations by Sex

		Factor I		Factor II		Factor III	
	N	Mean	SD	Mean	SD	Mean	SD
Men	196	-0.74	3.72	0.50	3.11	-0.46	2.53
Women	297	0.52	3.67	-0.41	3.13	0.32	2.46

In all three college settings, the men identified less strongly than the women with adult standards and authority, were more venturesome and impulsive, less cautious and apprehensive. Factor I of the Behavioral Differential varied significantly with sex but not with social class or college. Women are more likely than men to seek help from adults, to adopt adult or society's views of desirable behavior. Sex differences account for about 3 per cent of the variation in the behavior associated with this factor.

In summary, college setting was associated with a number of patterns of behavior, sex with a few, and social class with one. Individual variables account for from 2 to 4 per cent of the variation in a particular form of behavior. With no interaction among them, the three variables combined account for less than 10 per cent of the variation in that form of behavior with which they all are associated--a readiness versus reluctance to become closely involved with other students.

Residential status

Factor scores for the 9 factors of the Checklist of Events and the 8 factors of the Behavioral and Attitudinal Differentials were compared between residential and commuter students at the second state college added to the study for the purpose. None of the eight factors differentiated residential students from commuters. If these results are applicable to the other three colleges of the study, the differences observed among the three colleges cannot be attributed to the fact that two are commuter colleges and one a residential college. This is a highly questionable generalization, however, and the data cannot do more than indicate the absence of an effect due to residential status at the particular college studied. The absence of residential effects is also suggested by the position of the state college at an intermediate point between the private college and junior college. If residential effects were operating to any appreciable effect, the state college would be expected to fall closer to the junior college than it does.

CONCLUSIONS AND IMPLICATIONS

Patterns of Behavior

The several instruments used in the study were developed to provide somewhat different approaches to the identification of student groups or student types and the experiences associated with the various groups. The basic analyses were carried out for each instrument independently. Some attention has been given to joint analyses, as in associating factor scores on the Checklist of Events and the Attitudinal Differential with types of students identified through Q factor analysis of the Behavioral Differential. More extensive integration of the results achieved with each instrument is discussed below.

One instrument, the Checklist of Events, was built around specific experiences of the students during a recent, limited period of time. Two companion instruments, the Behavioral and Attitudinal Differentials, were built around statements of probable behavior in hypothetical situations. Items of all three instruments were written to tap four domains of behavior--academic behavior, organized group behavior, informal interpersonal behavior, and solitary behavior. The fourth instrument, the Student Type Indicator, was developed from a completely different rationale to provide information on student perceptions of student types. The structure of the similarities perceived by students in three of the Clark-Trow student subcultures and in two other commonly observed student orientations was investigated. The common elements in the results from this quartet of instruments are of more interest than results from a single instrument alone.

Academic and intellectual behavior

Various forms of academic behavior were written into all of the instruments of the study and were also prominent in the results, more so than the other domains of behavior for which items were written. Five of the nine factors of the Checklist of Events dealt with some form of academic or intellectual behavior. One of the four factors of the Behavioral Differential involved a cautious concern with academic performance. Two of the five factors that emerged from the student subcultures of the Student Type Indicator concerned academic and intellectual behavior.

The academic subculture of Clark and Trow (1960) and the scholarship environment of Pace (1963)--if subculture and environment can be considered parallel indicators of a type of student behavior--appear clearly in the results. The first factor of the Student Type Indicator describes a dimension having a clear commitment to academic behavior at one end--no questioning of the purpose of college, more than the required involvement in coursework, active participation in class discussions, and involvement with campus-oriented rather than off-campus groups. At the other end of the same dimension is an absence of commitment to academic concerns.

Factor 3 of the Checklist of Events provides behavioral detail consistent with the academic orientation just described but with an interesting limitation. Of the 7 items of behavior associated with the factor, two involve an academic orientation, but only with respect to a laboratory experiment. Classroom experiences outside the laboratory are not represented. The other five items all represent the opposite end of the academic dimension--missing class in some form and involvement off-campus, either because of commuting or through dating a nonstudent. The off-campus involvement here and in Factor I of the Student Type Indicator strongly support the contention of Clark and Trow that a major quality in the academic subculture is identification with and commitment to the institution. A major part of the reverse of the academic orientation is an orientation away from the campus.

The first two factors of the Checklist indicate two aspects of academic behavior that lead to some interesting speculation. Factor 1 deals predominantly with student-faculty interchanges and secondarily with course-related contact with other students. Factor 2, in contrast, deals exclusively with academic difficulty, has no element whatever of contact with a faculty member, but does indicate some helpful contact with other students. The clear separation of academic difficulty and faculty contact into two factors, with faculty contact completely absent from the academic difficulty factor, suggests some questions about the academic orientation generally. Is some degree of social facility needed, or at least important, if a student is to become strongly academically oriented? Or can an academic orientation be developed without sufficient social facility to establish direct contact with the faculty? What relationships exist, if any, between faculty contact and a strong academic orientation? Clark and Trow make identification with the faculty a major element of their academic subculture, but can adequate identification occur without direct interpersonal contact? The detailed and extensive report of the Muscatine Committee on education at the University of California at Berkeley mentions students who remain academically solvent at the University only by sacrificing social intercourse (University of California, Berkeley, Academic Senate, 1966). What potential academic gains are also sacrificed?

Factor 6 of the Checklist indicates behavior that is strongly academically oriented (conscientious, responsible, effective academic behavior), at least adequate social facility, but no contact whatever with faculty members. While some effective students would be found for whom this pattern of behavior is characteristic, they would not represent the academic subculture as Clark and Trow define it because of the apparent absence of faculty identification. They would, however, represent the academic orientation as perceived by the students in responding to the Types of Students Indicator.

Academic interest, or at least academic concern, is also indicated in Factor III of the Behavioral Differential. The intended behavior associated with this factor (as opposed to the actual behavior of the Checklist of Events) consists primarily of the exercise of caution when out-of-the-ordinary academic opportunities are offered. A concern for grades, class credit, and the opinions of other students would lead to rejection of the opportunity. Correlations between factor scores on this factor and the academic factors of the Checklist are small. (See Appendix H for factor score correlations.) Reluctance to risk academic standing for an unusual academic experience is apparently not closely associated with involvement with faculty, academic difficulty, or a conscientious approach to studies.

All of the six factors just discussed deal with formalized academic achievement and performance--concern over grades, difficulty with grades, and organized methods of study--but only a few elements of intrinsic intellectual interest can be found. The conscientious, organized approach to studying indicated by Factor 6 of the Checklist includes an item showing interest in a class lecture and another that mentions talking with students about coursework. The academic orientation as elucidated by the Student Type Indicator includes pursuing coursework beyond the requirements. But most of the elements of behavior included in these academic factors are those associated with the routine satisfaction of formal course requirements. Intellectual zest is largely found elsewhere.

The intellectual orientation associated with Factor IV of the Student Type Indicator contrasts sharply with the academic factors just described. Routine classwork and grades are specifically subordinated to an interest in ideas. Factors 8 and 9 of the Checklist seem closely related to this orientation. Factor 9 consists of intellectually oriented but haphazard and disorganized behavior. The two items most closely related to Factor 9 mention reading course-related but unrequired material, and the next item reports a missed meal because of studying. Intellectual interest is clearly high, but effective class performance is unimportant.

Factor 8 picks up the esthetic interests that are part of the intellectual orientation and has two items in common with Factor 9, both concerned with unrequired reading. The merging of intellectuality, nonconformity, and estheticism that Clark and Trow describe in their nonconformist subculture is clearly apparent in these three factors, two made up of the actual behavior of the Checklist and one consisting of student perceptions of this particular student type. Trow alludes to this pattern of behavior when he speaks of ". . .the various 'nonconformist' worlds of campus radicals, aesthetes, and bohemians." (Trow, 1965, p. 58). But while esthetes, bohemians, and radicals of a sort can all be accommodated in this pattern of intellectual behavior, other forms of nonconformity--the undirected student who rejects most college student values and the protestor against social ills, as two examples--cannot be.

A final question might be raised about the salience of either the academic or intellectual orientation in the attitudes of the students of this study. In the Q analysis of the Behavioral Differential six types of students emerged--six types that represent distinct clusters of students identified by characteristic patterns of responses to the Behavioral Differential. None of the six types had either academic or intellectual behavior associated with them as an important part of the behavior pattern. The forms that did distinguish among these six types of students were active versus passive behavior, acceptance or rejection of adult standards, and involvement or lack of involvement with others, both students and adults. Type 1c, which included a tendency not to seek further information when offered an opportunity for independent study, but to go ahead and volunteer impulsively comes closest to an intellectual concern. The other qualities of this student type, though--rejection of adult help, feelings of irritation, anger, confidence, and venturesomeness in the censorship situation but without taking action, but a readiness to become involved with students--suggest that interpersonal involvement is more important than the academic aspect of the behavior.

Dependence on adults

The major component found in the responses to the Behavioral Differential, both in factors underlying the variables and in the factors underlying the students, is an acceptance of an adult or authoritative point of view and dependence on adults for direction and for help when in difficulty. One factor on the Checklist of Events and one on the Student Type Indicator are related to involvement with adults. In general, though, the patterns of actual, detailed behavior reported by the students do not relate to adult dependence in spite of the dominant position of that element in the reports of probable behavior in given situations.

The first factor of the Behavioral Differential consists primarily of going to adults for help when in some form of difficulty and secondarily in an acceptance of adult standards of conduct. An invitation to join in a questionable escapade, for example, is responded to by attempting to dissuade others from it. An attempt is made to settle things down when horseplay erupts in the college union. The position of the administration is adopted when a student publication is censored. Lack of success in a tutoring project is met by giving a pep talk to the tutees. These items, however, were not as highly related to the factor as items that reflect getting help from adults when in trouble. Thus both dependence on adults and identification with an adult position constitute the first factor of the Behavioral Differential.

The second factor indicates something of a reverse orientation. It consists partly of protesting the censorship action of the administration, but also includes impulsive, venturesome behavior in which adult relationships are not relevant. The active, somewhat rebellious rejection of adult standards appears more clearly in the first factor of the Q analysis of the Behavioral Differential.

When clusters of students were identified in terms of similar patterns of responses to the items of the Behavioral Differential, one clearly distinguished group reported they would actively engage in student protests against the administration, would not seek help from adults when in trouble, and would immediately enter into questionable escapades. The rejection of adult help distinguished this group of students from another group who would actively protest administrative censorship but who would not reject adult help. This second group also seemed more mature than the first in their willingness to become involved with other students in mildly stressful situations.

Another distinct group of students was distinguished only by high scores on the first Behavioral Differential factor--a strong dependence on adults for help and a strong espousal of adult standards of behavior.

A form of dependence somewhat different from that associated with Factor I of the Behavioral Differential is found in Factor III. This pattern consists of worry over grades and academic credit, reluctance to risk them in an unusual academic opportunity, and a strong reliance on adults and students in coming to a decision not to try something new and uncertain. The correlation between factor scores of this factor and those of Factor I, the factor indicating high dependence on adults, is 0.43. (The correlation matrix for factor scores of the Behavioral Differentials and the Checklist of Events is found in Table D, Appendix H.)

Among the five bipolar student orientations revealed by the Student Type Indicator were several elements of conformity or rejection of particular points of view. They are not associated with adult versus peer standards, though, and the elements of conformity do not necessarily imply dependence. The orientation toward vocational preparation and away from social protest, however, does suggest dependence on adults. Students of this orientation want good grades in order to please prospective employers and reject social protest and change. This student orientation fits well with the dependence on adults and the acceptance of adult points of view that appeared so strongly in the Behavioral Differential.

The actual behavior of the Checklist of Events showed very little of this pattern of behavior. Except for the Factor I, which indicates extensive interaction with adults--not, however, of a dependent sort--influence of adult points of view and dependence on adults were conspicuously absent. The items of the

Checklist and the Behavioral Differential were equally detailed and were written to tap the same domain of behavior. When stating what their probable actions would be in a given situation, some students indicated a very strong dependence on adults. When they stated the activities they had actually engaged in, that dependency did not appear.

Aimlessness

Behavior having an undirected, haphazard, aimless quality appeared in several factors of the Student Type Indicator and the Checklist of Events. The students of the study perceived two dimensions or orientations to college that include qualities of aimlessness. The reverse of the academic orientation is one of these. The strong commitment to academic pursuits at one end of this dimension is balanced by questioning of the purpose of college and involvement with off-campus groups as well as an absence of academic commitment. This in itself does not imply aimlessness any more than it might imply a counter-academic orientation. But the other indicators of aimlessness make it seem a more reasonable interpretation of this end of the dimension than a directed drive away from academic involvement. That the students are in fact in college casts a small amount of doubt on the counter-academic interpretation.

Factor V of the Student Type Indicator suggests a more pervasive sense of aimlessness. Students of this type reject not just academic pursuits but custom and tradition generally, self-understanding, social status, and esthetics. Almost all the usual reasons for attending college are rejected. Even vocational development as a purpose for college is only half-heartedly endorsed. While students of this orientation do want classwork to be occupationally relevant, they do not endorse occupational preparation as an important purpose of college. They seem almost unable to account for their being in college.

The specific experiences of the Checklist of Events adds to the picture of the confused, diffuse, aimless student. Factor 7 is a rich mixture of fooling around, boredom, irritation, arguments with students and instructors, interesting discussions with students, and lack of organization. The pattern indicates anything but passive withdrawn behavior. It represents highly active behavior and at least a moderate degree of involvement with other people. But it has no direction, no focus; it is random and diffuse.

Factor 9 has some of the elements of Factor 7--lack of organization, a haphazard quality--but it also has some focus on intellectual concerns. It includes course-related reading, using the library for a class assignment, and enough involvement in studies to miss a meal because of them. But it seems also to represent an inability to become fully committed to the effective pursuit of intellectual goals.

Withdrawal

Another form of behavior that, like the aimless pattern, is probably limiting with respect to student effectiveness is withdrawal from most involvement with other people. Factor IV of the Behavioral Differential most clearly indicates this inclination. Disagreement in a bull session leads to leaving the discussion, refraining from entering it, or changing the topic. Horseplay in the college union prompts the student to leave or at least ignore it. A friend having problems is not "interfered" with. An invitation by an instructor to hear an off-campus speaker prompts the student to go but not with the instructor.

This reluctance to get involved with other people or in mildly threatening activities is characteristic of a type of student identified by the Q analysis of the Behavioral Differential. Also characteristic of the same group is failure to seek adult help when in difficulty and feelings of caution, hesitancy, apprehension, and detachment in a student-administration dispute over censorship. Detachment and disengagement are the qualities most representative of this type of student and the pattern of behavior he follows.

The fourth factor of the Checklist includes a suggestion of this pattern. In general the Checklist factors are not readily associated with withdrawal or detachment even though Factor 2, academic difficulty, Factor 7, esthetic behavior, and Factor 9, haphazard intellectual activity may be pursued largely in solitude. Factor 4 only hints at withdrawal, suggesting a student who has not yet made any personal contacts on the campus and clings, through letters home, to his previous experiences.

The report of the Muscatine Committee mentioned earlier suggests that the withdrawn students may account for many of the academically capable dropouts from Berkeley. Withdrawal from college is certainly consistent with the general pattern. Many of the academically capable dropouts from Berkeley ". . .tend to be isolated from their peers, lonely, and unable to accept help from friends or counselors." (University of California, Berkeley, Academic Senate, 1966, pp. 21-22).

Types of Students

In a sense, patterns of behavior and types of students cannot be effectively separated; each is associated with the other. This is clearly apparent in the preceding discussion, in which the center of attention shifts back and forth between student types or orientations and patterns of behavior. To some extent this is a consequence of the use of the same instrument, the Behavioral Differential, in developing student types and behavioral patterns. But data from the unrelated instruments, the Student Type Indicator and the Checklist of Events, were also consistent with the student types and behavior patterns of the Behavioral Differential.

The major consequences of examining student perceptions of three of the Clark-Trow subcultures plus two other student orientations were (1) to confirm much of what Clark and Trow have had to say about the academic and vocational subcultures, (2) to elaborate substantially on the varieties of nonconformist behavior, (3) to clarify the nature of the intellectually oriented student as neither academic in the sense used in this report nor wholly nonconformist, (4) to shift the representation of types of students from one of categories to one of bipolar dimensions, and (5) to suggest several additional orientations characteristic of students but not identifiable in most present student typologies.

The undirected versus self-centered dimension was the least expected of the dimensions that appeared. It makes considerable psychological sense in terms of identity diffusion as opposed to a primarily ego-centered orientation. Exploration of correlates of this dimension, such as level of anxiety, or the processes associated with movement along the dimension, would be valuable additions to the understanding of late adolescent development. The psychologically most desirable region of the dimension may be the middle range, either extreme suggesting a developmental problem.

The distinctions between the academically uncommitted student and the undirected student are not clear and would probably justify further study. The distinctions between the traditional as opposed to the autonomous student and the conformist as opposed to the intellectual student are somewhat clearer but also suggest questions. Are the autonomous-traditional and intellectual-conformist dimensions related, with development of independence and intellectual values occurring jointly as students leave the security of conformity and tradition? Or are they independent? Does development on one dimension precede development on the other? Is a degree of autonomy necessary for genuine intellectual (as opposed to academic) development to occur? Or can intellectual understanding facilitate the development of personal autonomy? In any case, the five dimensions identified by the students in their responses to the Student Type Indicator seem promising conceptual devices for studying late adolescent development.

Behavior associated with a priori student classifications

The quite small and relatively few differences in behavioral patterns observed across variables of college setting, social class, sex, and residential status were encouraging in one sense and disappointing in another. When college setting, social class, and sex combined can at best account for less than 10 per cent of the variation in student behavior, attention can be shifted with some confidence to more detailed, less gross studies of college student behavior. Perhaps the continued appearance of statistically significant findings when these variables have been studied, without attention to the strength of the association found, has encouraged the proliferation of studies in these areas. A shift in focus to variables with a smaller scale or to more thoughtfully specified subgroups of students seems called for.

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APPENDIX F

Table A

Factor Matrix for Behavioral Differential
(Decimal points omitted)

	I	II	III	IV	V
A. Invitation from instructor for trip to hear a speaker.					
1. Ask about class credit.	09	04	45	10	11
2. Volunteer to go.	35	27	-31	10	-12
3. Go separately with friends.	07	23	12	34	-19
4. Seek more information.	24	28	15	06	-42
5. Defer a decision until study demands are known.	21	11	28	17	-28
B. Administrative action against student publication.					
6. Agree with administration's position.	34	-39	-02	22	10
7. Picket administration building.	-08	57	-01	02	06
8. Remain uninvolved.	01	-47	23	21	04
9. Form student protest group.	06	59	-15	11	-22
10. Sign petition of protest	-15	59	13	-09	-11
C. Open weekend coming up.					
11. Impulsively go out of town.	-04	49	07	-06	06
12. Spend weekend alone.	19	07	-26	26	-08
13. Spend time with steady date.	06	07	29	25	-09
14. Try to meet a new date.	12	36	09	-03	08
15. Spend weekend with nonschool friends.	09	21	18	-10	-02
D. Horseplay in the student union.					
16. Settle things down.	42	14	-12	04	-07
17. Leave the scene.	12	-10	04	50	-12
18. Join in and enjoy it.	-09	29	19	-12	42
19. Enjoy it as an uninvolved spectator.	-18	17	39	09	25
20. Ignore it.	-10	04	07	46	-02
E. Offer of independent study.					
21. Seek more information from instructor.	14	09	42	-04	-44
22. Reject offer, stay with class.	00	-34	35	12	11
23. Volunteer immediately.	16	38	-28	09	04
24. Ask about effect on grade.	20	-03	62	-01	-16
25. Talk with other students first.	14	-01	55	10	-03

Table A (Continued)

	I	II	III	IV	V
F. Bull session disagreement.					
26. Leave the discussion.	14	-23	06	55	20
27. Reject opposing view; press own view vigorously.	15	28	15	-13	13
28. Probe opposing view gently.	21	12	15	01	-46
29. Change the situation.	21	-19	11	49	11
30. Listen without expressing own views.	01	-22	02	59	14
G. Unexpected low grade in exam.					
31. Think things through alone.	45	12	-13	15	-24
32. Relax with other students.	-06	19	23	27	09
33. Talk with parents.	50	-16	10	08	-06
34. Talk with instructor.	55	-02	-02	-03	-12
35. Talk with close friend.	31	08	29	04	-12
H. Frustrated tutoring project.					
36. Ask for new tutees.	22	08	21	20	55
37. Ask for help from other tutors.	35	09	12	09	09
38. Abandon the project.	01	06	21	23	57
39. Try own new approach.	19	07	02	-03	-36
40. Give tutees pep talk.	40	-05	28	04	03
I. Invitation to join in a disapproved activity.					
41. Go along, but behave.	-23	36	11	03	44
42. Don't go.	32	-14	13	06	-24
43. Join in, looking forward to it.	-26	37	-02	05	44
44. Try to dissuade the others.	54	-09	00	-04	-27
45. Make excuses.	28	-10	21	10	-12
J. A friend is upset and missing classes.					
46. Suggest counseling with an adult.	60	-10	14	-02	-15
47. Go to counselor or other adult for him.	55	11	07	-10	08
48. Convince him to try harder.	46	-03	34	-18	-13
49. Don't interfere.	-14	03	-02	52	-01
50. Show interest without intruding.	-01	08	17	25	-47

APPENDIX F

Table B

Factor Matrix for Types of Students

Hypothetical Student	Factor I	Factor II	Factor III	Factor IV	Factor V
Vocational:					
1. Wants classwork to give him something useful in a job.	-1.80	-0.37	-1.58	1.04	-1.78
2. Major purpose in college is occupational preparation.	0.18	0.77	-2.70	1.04	-0.29
3. Wants good grades because employers want them.	-0.01	0.15	-2.11	2.14	-0.21
Academic:					
4. Pursues coursework further than required.	1.97	0.36	0.03	-0.94	-0.01
5. More interested in ideas than grades.	0.40	0.25	0.62	-2.04	0.23
6. Often hotly discusses issues raised in class.	1.93	-0.07	0.96	-0.06	-0.12
Nonconformist:					
7. Independent of group standards and pressures.	-0.13	2.07	-0.47	-0.47	-0.63
8. Involved in social concerns and protests.	0.32	0.29	2.04	0.26	0.01
9. Rejects custom and tradition.	-0.43	1.32	0.85	0.36	-2.34
Identity seeker:					
10. Seeks new experiences.	0.84	0.33	0.53	-0.88	0.31
11. Major concern is understanding self.	-0.82	-0.13	0.50	-0.03	1.69
12. More involved with off-campus than with on-campus groups.	-1.90	1.23	0.83	-0.12	0.45

Table B (Continued)

Hypothetical Student	Factor I	II	III	IV	V
Status seeker:					
13. Major concern is association with important persons.	-0.38	-1.39	-0.44	1.73	1.33
14. Wants to be recognized as a leader by other students.	0.59	-1.71	0.39	1.46	1.39
15. Values Homecoming Week, Spring Carnival, etc.	-0.38	-3.42	-0.25	0.10	-0.07
Academic-Nonconformist:					
16. Neglects routine classwork because of interest in ideas.	1.17	-0.06	-0.02	-1.91	-0.47
17. Concerned with esthetics.	-0.39	0.76	-0.94	-2.20	1.29
18. Questions the purpose of college.	-2.02	-0.03	1.46	-0.11	-1.32

APPENDIX G

Table C

Analysis of Variance Summaries

Behavioral Differential and Attitudinal Differential Factor Scores

Source of Variation	SS	df	MS	F	$F_{.99}$
BD Factor I:					
A (College)	41.78	2	20.89	1.52	4.61
B (Social class)	53.63	4	13.41		
C (Sex)	203.10	1	203.10	14.76	6.63
AB	164.27	8	20.53	1.49	2.51
AC	7.51	2	3.76		
BC	14.89	4	3.72		
ABC	154.44	8	19.30		
Error	6368.98	463	13.76		
BD Factor II:					
A (College)	239.42	2	119.71	12.78	4.61
B (Social class)	109.43	4	27.33	2.91	3.32
C (Sex)	150.18	1	150.18	16.03	6.63
AB	8.85	8	1.11		
AC	3.81	2	1.90		
BC	23.70	4	5.92		
ABC	70.01	8	8.50		
Error	4339.08	463	9.37		

Table C (Continued)

Source of Variation		SS	df	MS	F	$F_{.99}$
BD Factor III:						
A	(College)	120.73	2	60.36	9.95	4.61
B	(Social class)	57.26	4	14.32	2.12	3.32
C	(Sex)	3.21	1	3.21		
AB		8.38	8	1.05		
AC		20.54	2	10.27		
BC		1.14	4	0.28		
ABC		86.67	8	10.83		
	Error	3121.39	463	6.74		
BD Factor IV:						
A		88.86	2	44.43	7.37	4.61
B		108.46	4	27.12	4.49	3.32
C		1106.85	1	106.85	17.72	6.63
AB		1.33	8	0.17		
AC		2.48	2	1.24		
BC		25.40	4	6.35		
ABC		2.13	8	0.27		
	Error	2789.67	463	6.03		

Table C (Continued)

Source of Variation	SS	df	MS	F	$F_{.99}$
AD Factor I:					
A	173.97	2	86.98	6.65	4.61
B	69.44	4	17.36	1.33	3.32
C	13.58	1	13.58		
AB	88.81	8	11.10		
AC	5.81	2	2.90		
BC	26.36	4	6.59		
ABC	143.02	8	17.63		
Error	6056.56	463	13.08		
AD Factor II:					
A	59.32	2	29.66	5.95	4.61
B	25.55	4	6.39	1.28	3.32
C	11.28	1	11.28	2.26	6.63
AB	29.04	8	3.63		
AC	1.12	2	0.56		
BC	1.68	4	0.42		
ABC	38.80	8	4.85		
Error	2308.01	463	4.98		

APPENDIX E

Table D

Factor Score Correlations for the Checklist of Events, Behavioral Differential and Attitudinal Differential

(Decimal points omitted)

	Checklist of Events								Behavioral Differential				Attitudinal Differential (Situation B)			
	2	3	4	5	6	7	8	9	1	2	3	4	1	2	3	4
1	36	09	04	32	06	37	30	38	01	14	04	03	-04	-06	11	-02
2		00	04	19	13	33	25	25	05	10	02	03	-02	02	03	01
3			-05	-02	-12	-01	-08	-02	-02	-03	-05	05	-04	-03	07	-01
4				05	00	05	-01	04	-11	08	-09	06	-10	-03	03	-11
5					14	29	26	16	-02	14	03	01	-06	-06	03	-05
6						14	17	18	-04	10	-09	10	00	-07	03	04
7							26	28	00	18	01	16	-07	-04	-04	-02
8								30	17	13	08	-04	-02	-04	04	03
9									-06	22	-10	06	-12	-11	11	-06
1										-19	43	-29	17	14	01	07
2											-13	32	-46	-44	35	-24
3												-34	10	11	-10	07
4													-30	-30	24	-11
1														76	-72	53
2															-72	19
3																-83

APPENDIX A

COLLEGE STUDENT PERSONNEL INSTITUTE
Tenth and Dartmouth
Claremont, California (1,2)

COLLEGE EXPERIENCES CHECKLIST (3,4,5)

Listed below are a number of possible events or experiences in which you, as a college student, might have been engaged. Please check after each statement whether, during the past two weeks, you have or have not done whatever is stated, and if you have, whether once or twice or more often.

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Got a lower grade on a quiz, exam, or paper than I thought I deserved.	____	____	____	107
Played chess.	____	____	____	108
Wrote up a lab experiment without having done it.	____	____	____	109
Worked on a community service project.	____	____	____	110
Did well on a quiz or class assignment.	____	____	____	111
Played tennis or golf.	____	____	____	112
Got a higher grade on a quiz, exam, or paper than I thought I deserved.	____	____	____	113
Started a lively discussion in class.	____	____	____	114
Studied on a Saturday or Sunday morning.	____	____	____	115
Attended a meeting of a student organization.	____	____	____	116
Got lost or left behind in a classroom lecture or discussion.	____	____	____	117
Discussed a paper or project or issue at length with an instructor.	____	____	____	118
Caught up in a course I'd been behind in.	____	____	____	119
Chatted with the student next to me during a lecture.	____	____	____	120
Turned in a paper late.	____	____	____	121
Cut a class.	____	____	____	122

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Read some unassigned material related to a course.	____	____	____	123
Missed a meal.	____	____	____	124
Wrote a poem.	____	____	____	125
Worked with a student group on a major project.	____	____	____	126
Had a date with someone who isn't a student.	____	____	____	127
Read some assigned material without understanding it.	____	____	____	128
Correctly figured out what would be asked on an exam.	____	____	____	129
Got irritated by something said in a class discussion.	____	____	____	130
Went to an art exhibit.	____	____	____	131
Wrote a letter to a newspaper or other publication.	____	____	____	132
Saw a play.	____	____	____	133
Found questions on an exam or quiz that I knew nothing about.	____	____	____	134
Got discouraged and talked it over with another student.	____	____	____	135
Went on a picnic, beach party, or other outing with a small informal group.	____	____	____	136
Presented a new idea to the members of a student organization.	____	____	____	137
Bought a book not required for a course.	____	____	____	138
Went swimming.	____	____	____	139
Went to the infirmary or student health center for treatment.	____	____	____	140

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Talked with other students about topics related to courses.	______	______	______	141
Missed a class because of commuting difficulties.	______	______	______	142
Got bored by a classroom lecture or discussion.	______	______	______	143
Got help from an instructor outside class.	______	______	______	144
Organized or directed a student project.	______	______	______	145
Read poetry not assigned in class.	______	______	______	146
Met a new acquaintance.	______	______	______	147
Met someone on campus whom I'd like to know better.	______	______	______	148
Watched an athletic event.	______	______	______	149
Had a date with someone I date regularly.	______	______	______	150
Got help in a course from another student.	______	______	______	151
Looked up material in the library for a class assignment.	______	______	______	152
Contributed money to a political or social cause.	______	______	______	153
Got into an interesting bull session.	______	______	______	154
Read most of the stories or articles in a magazine.	______	______	______	155
Got very interested in a class lecture.	______	______	______	156
"Tied up" in an exam or quiz.	______	______	______	157
Rewrote some class notes.	______	______	______	[illegible]8
Practiced with a varsity or freshman athletic team.	______	______	______	159
Attended a meeting of a student political group.	______	______	______	160

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Bought some new clothes.	____	____	____	161
Played bridge.	____	____	____	162
Went on a large group picnic, beach party, or other outing.	____	____	____	163
Played a musical instrument just for my own enjoyment.	____	____	____	164
Talked with an instructor about classwork.	____	____	____	165
Talked casually with an instructor outside class.	____	____	____	166
Stayed late to finish a laboratory experiment.	____	____	____	167
Worked on a painting or sculpture.	____	____	____	168
Worked on a student committee.	____	____	____	169
Attended a campus lecture or assembly.	____	____	____	170
Spent an hour or more reading material related to but not required by my courses.	____	____	____	171
Argued with my parents.	____	____	____	172
				(78,79,80)
Dropped behind in a course.	____	____	____	207
Helped another student with his (her) studies.	____	____	____	208
Did poorly on an exam or quiz.	____	____	____	209
Attended a lecture off campus.	____	____	____	210
Argued with one or more other students.	____	____	____	211
Wrote a letter to a friend of the opposite sex.	____	____	____	212
Arrived late at a class.	____	____	____	213
Had coffee, a hamburger, or coke, etc. with some students.	____	____	____	214

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Sat through a small class discussion without saying anything.	____	____	____	215
Worked in a school political campaign.	____	____	____	216
Argued in class with an instructor.	____	____	____	217
Fooled around.	____	____	____	218
Dozed during a class lecture.	____	____	____	219
Wrote a short story.	____	____	____	220
Taught a Sunday School class.	____	____	____	221
Distributed posters or other announcements of a meeting.	____	____	____	222
Spent an hour or more reading unrequired fiction.	____	____	____	223
Questioned an instructor about a grade.	____	____	____	224
Got help from another student in a lab experiment.	____	____	____	225
Had a date with someone I'd dated before.	____	____	____	226
Had a casual date, such as for coffee, cokes, or a movie.	____	____	____	227
Crammed for an exam.	____	____	____	228
Tried out for a part in a dramatic production.	____	____	____	229
Followed a planned schedule for studying.	____	____	____	230
Reviewed some class notes.	____	____	____	231
Wrote a letter home.	____	____	____	232
Played in an athletic event against another college.	____	____	____	233
Gave a talk before a nonstudent group.	____	____	____	234
Talked with one or both of my parents.	____	____	____	235

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Worked on a student newspaper, yearbook, or other student publication.	____	____	____	236
Worked with one or more other students on a class project.	____	____	____	237
Went to a concert.	____	____	____	238
Studied past 1:00 a.m.	____	____	____	239
Missed a meal because of studies.	____	____	____	240
Went to church.	____	____	____	241
Interrupted an instructor to ask a question.	____	____	____	242
Went home.	____	____	____	243
Participated in an organized intramural athletic event.	____	____	____	244
Had an interview with a counselor.	____	____	____	245
Studied for three hours or more without a break.	____	____	____	246
Conducted a meeting of a student organization.	____	____	____	247
Went to a dance.	____	____	____	248
Worked at a part-time job on campus.	____	____	____	249
Studied with several other people.	____	____	____	250
Went for a walk by myself.	____	____	____	251
Seriously considered changing my field of study.	____	____	____	252
Played a musical instrument or sang in a public performance.	____	____	____	253
Helped organize a student group.	____	____	____	254
Attended a reading improvement session.	____	____	____	255

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Did some art work or photography for a student publication.	____	____	____	256
Went to a movie with a group of students.	____	____	____	257
Had a date with someone I hadn't dated before.	____	____	____	258
Got into a serious discussion about religion.	____	____	____	259
Got irritated with an instructor.	____	____	____	260
Missed a class because of sickness.	____	____	____	261
Attended a lecture on study methods.	____	____	____	262
Attended a meeting for a political or social cause.	____	____	____	263
Got help with studies from another student.	____	____	____	264
Turned down an invitation to do something else because I had to study.	____	____	____	265
Worked at an off-campus job.	____	____	____	266
Finished a major paper for a class.	____	____	____	267
Got involved in a lively class discussion.	____	____	____	268
Gave a talk before a student group.	____	____	____	269
Read an article in a professional journal.	____	____	____	270
Outlined the material in a text.	____	____	____	271
Helped a high school student or younger person with school work.	____	____	____	272
			(78,79,80)	
Broke a school regulation.	____	____	____	307
Had trouble concentrating while trying to study.	____	____	____	308
Dragged with someone in another car.	____	____	____	309

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Played a trick on another student.	____	____	____	310
Talked with a friend of the same sex about something that was bothering me.	____	____	____	311
Complained to my parents about something at college.	____	____	____	312
Got into a shouting argument with someone.	____	____	____	313
Gave advice to another student.	____	____	____	314
Talked with an adviser about something other than my classes.	____	____	____	315
Rehearsed for a dramatic production.	____	____	____	316
Had a beer or glass of wine.	____	____	____	317
Went to or was invited to a party.	____	____	____	318
Played cards for money.	____	____	____	319
Smoked.	____	____	____	320
Did something for which I could have been disciplined if caught.	____	____	____	321
Confided in a friend of the opposite sex about something that was bothering me.	____	____	____	322
Asked someone for a date.	____	____	____	323
Did something my parents would disapprove of.	____	____	____	324
Was criticized by another student for something I'd done.	____	____	____	325
Introduced myself to someone.	____	____	____	326
Took part in a prank.	____	____	____	327
Read an article or story in *Playboy*.	____	____	____	328
Prayed.	____	____	____	329
Read part of a newspaper other than the front page, sport pages, and comics.	____	____	____	330

During the past two weeks, I . . .

	(1) Not at all	(2) Once or twice	(3) Three or more times	
Argued about civil rights.				331
Talked about sex with another student.				332
Socialized with an instructor (over coffee, coke, beer, etc.).				333
Cheated on a quiz or exam.				334
Had a blind date.				335
Sat in on a bull session without saying much.				336
Wasted time.				337
Got angry.				338
Sang or whistled just because I felt good.				339
Apologized for something I'd done.				340
Ran for office in a student group.				341
Talked with a brother or sister about a problem.				342
Had an alcoholic drink other than beer or wine.				343
Went to a movie by myself.				344
Did some classwork for extra credit.				345
Started a conversation with someone I didn't know.				346
Flirted with someone.				347
Read a nonfiction book not assigned in class.				348
Went to a rally.				349
Let go in an emotional outburst.				350
Read the stock market quotations.				351

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Complained to a friend about a course or a class assignment.	____	____	____	352
Got turned down for a date.	____	____	____	353
Discussed the Los Angeles riots of last August.	____	____	____	354
Turned in a paper that wasn't all my own work.	____	____	____	355
Used someone else's toothbrush.	____	____	____	356
Went to a drinking party.	____	____	____	357
Got drunk.	____	____	____	358
Talked with other students about something I wouldn't discuss with my parents.	____	____	____	359
Talked with a priest, minister, or rabbi about a problem.	____	____	____	360
Did something on the spur of the moment.	____	____	____	361
Complained to an instructor or other college official about something.	____	____	____	362
Had dinner by myself.	____	____	____	363
Borrowed a piece of clothing from another student.	____	____	____	364
Told someone off.	____	____	____	365
Borrowed some money.	____	____	____	366
Argued about the Viet Nam situation.	____	____	____	367
Had fun with some other students when I still had studying to do.	____	____	____	368
Talked about sex with someone of the opposite sex.	____	____	____	369
Joined in some folk singing with some other people.	____	____	____	370

During the past two weeks, I . . .	(1) Not at all	(2) Once or twice	(3) Three or more times	
Broke a date.	____	____	____	371
Went surfing.	____	____	____	372

Please list below one or two incidents of the past two weeks that stand out sharply in your memory.

(78,79,80)

APPENDIX B

College Student Personnel Institute
Tenth and Dartmouth
Claremont, California

BEHAVIORAL DIFFERENTIAL

On each of the following pages a situation sometimes faced by college students is described. Below each statement of the situation are a number of ways students might react to that situation. Please circle the number on the line above each reaction statement that best indicates how likely or unlikely it is that you would react that way in that situation.

For example, the situation described might be:

A friend is running for a student body office and asks you to be his campaign manager.

Definitely would not	Might, might not (50/50 chance)	Definitely would

1 2 3 4 5 6 [✓ 7] 8 9
Decide not to be his campaign manager, but offer to work on his campaign.

1 [✓ 2] 3 4 5 6 7 8 9
Ask who else would be on the campaign committee.

In the example, the person circled number 7 for the first statement because he very probably would reject the offer to be campaign manager, but would work for him. However, he's not certain, so he did not circle either 8 or 9.

For the second statement, he thought he almost definitely would not do that, so he circled number 2. Number 5 is the midpoint and would be circled if he were no more likely to react that way than not.

Please respond in a similar way to each of the situations described on the following pages, circling the number that indicates how likely you would be to react in the way described by each statement.

(1,2)

(3,4,5)

A. A noted speaker is to talk next Tuesday evening at a public meeting in a nearby community. The college has no connection with the meeting, but one of your instructors offers to drive several students there to hear the talk.

Definitely would not				Might, might not (50/50 chance)				Definitely would

7. 1 2 3 4 5 6 7 8 9 Ask whether class credit would be involved.

8. 1 2 3 4 5 6 7 8 9 Ask to go with the instructor.

9. 1 2 3 4 5 6 7 8 9 Go on my own with some friends.

10. 1 2 3 4 5 6 7 8 9 Ask more about the speaker and the nature of the talk.

11. 1 2 3 4 5 6 7 8 9 Wait to see what studies I had Tuesday night and then decide.

* * * *

B. A student publication has carried an article on birth control pills. The college administration has halted distribution of the publication, stating the article is not in good taste or appropriate for college publications.

12. 1 2 3 4 5 6 7 8 9 Agree with the administration's position.

13. 1 2 3 4 5 6 7 8 9 Join students in picketing the administration building.

14. 1 2 3 4 5 6 7 8 9 Remain uninvolved in the issue.

15. 1 2 3 4 5 6 7 8 9 Get together a student group to present proposals to the administration, after exploration of the issues.

16. 1 2 3 4 5 6 7 8 9 Sign a petition to be taken to the administration protesting their action.

C. A weekend is approaching during which no organized campus activity is planned. You are completely caught up on your studies and have no exams coming up and no papers due.

Definitely would not
Might, might not (50/50 chance)
Definitely would

17. 1 2 3 4 5 6 7 8 9
Go someplace out of town (Santa Cruz, Tijuana, San Francisco, etc.) on the spur of the moment.

18. 1 2 3 4 5 6 7 8 9
Spend the weekend largely by myself, doing things I enjoy.

19. 1 2 3 4 5 6 7 8 9
Spend as much time as possible with my steady date.

20. 1 2 3 4 5 6 7 8 9
Try to meet someone interesting I might then date.

21. 1 2 3 4 5 6 7 8 9
Spend the weekend with friends who aren't necessarily students, in activities completely unrelated to school.

* * * *

D. You're having coffee with some other students in the student union or some other place where students frequently go for coffee, cokes, or hamburgers. Some students get pretty boisterous and start throwing wet napkins and flipping pats of butter at each other.

22. 1 2 3 4 5 6 7 8 9
Try to settle things down before it gets out of hand.

23. 1 2 3 4 5 6 7 8 9
Leave before getting involved.

24. 1 2 3 4 5 6 7 8 9
Join in and enjoy it.

25. 1 2 3 4 5 6 7 8 9
Enjoy it as a spectator without getting involved.

26. 1 2 3 4 5 6 7 8 9
Ignore the whole thing.

E. One of your instructors offers to let a limited number of students spend the semester working independently, each one on his own, not going to any classes or taking any tests, but meeting individually with the instructor from time to time.

Definitely would not	Might, might not (50/50 chance)	Definitely would

1 2 3 4 5 6 7 8 9
27. Ask the instructor what he would expect of the student doing independent work before deciding what to do.

1 2 3 4 5 6 7 8 9
28. Reject his offer and stay with the class.

1 2 3 4 5 6 7 8 9
29. Ask immediately to be one of the group to work independently.

1 2 3 4 5 6 7 8 9
30. Ask the instructor how the independent study would affect a person's grade.

1 2 3 4 5 6 7 8 9
31. Talk it over with other students before deciding what to do.

* * * *

F. In an informal discussion with a small group of students--some good friends and some casual acquaintances--one of the students you don't know very well describes a point of view with which you disagree strongly.

1 2 3 4 5 6 7 8 9
32. Leave the discussion before it gets heated and I get involved in it.

1 2 3 4 5 6 7 8 9
33. Reject his points, presenting my views vigorously and in open disagreement with him.

1 2 3 4 5 6 7 8 9
34. Ask him gentle but probing questions, suggesting possible alternative points of view.

1 2 3 4 5 6 7 8 9
35. Change the situation, perhaps by changing the topic, perhaps by suggesting a new activity like going out for a coke, coffee, or beer.

1 2 3 4 5 6 7 8 9
36. Keep quiet about my own views, but stay to hear the discussion.

G. You've just received a very low grade in an important exam in which you had expected to do well.

Definitely would not	Might, might not (50/50 chance)	Definitely would

37. 1 2 3 4 5 6 7 8 9 Get off someplace by myself and think things through.

38. 1 2 3 4 5 6 7 8 9 Go out with a bunch of other students to have fun and relax a little bit.

39. 1 2 3 4 5 6 7 8 9 Talk with my parents about it.

40. 1 2 3 4 5 6 7 8 9 Talk with the instructor about it.

41. 1 2 3 4 5 6 7 8 9 Talk things over with a close friend.

* * * *

H. You've been spending one evening a week tutoring high school students in a low income section of town. The ones you're working with seem fairly bright, but uninterested in learning and unwilling to put much effort into studying.

42. 1 2 3 4 5 6 7 8 9 Ask for some other students who are better motivated than the first ones.

43. 1 2 3 4 5 6 7 8 9 Ask some of the other tutors to help me with these students.

44. 1 2 3 4 5 6 7 8 9 Decide to abandon the tutoring project.

45. 1 2 3 4 5 6 7 8 9 Try on my own to work out a new approach to talk with these students.

46. 1 2 3 4 5 6 7 8 9 Tell the students how important an education is and if they don't work harder at their studies they'll never get any place.

I. Some friends ask you to join them in an activity you ordinarily disapprove of (a somewhat wild party; trying out pep pills, pot, LSD, or other drugs; a prank involving petty theft, or something else that's questionable in your value system).

Definitely would not
Might, might not (50/50 chance)
Definitely would

1 2 3 4 5 6 7 8 9
47. Go with them, but stay out of the questionable activities.

1 2 3 4 5 6 7 8 9
48. Decide that the possible consequences make it not worth the risk of going.

1 2 3 4 5 6 7 8 9
49. Join them, looking forward to the new experiences.

1 2 3 4 5 6 7 8 9
50. Try to dissuade them.

1 2 3 4 5 6 7 8 9
51. Find some reason not to join them.

* * * *

J. A friend of yours who is a good student has lately begun missing most of his classes, studies little if at all, is obviously upset over something, and is talking about leaving college.

1 2 3 4 5 6 7 8 9
52. Suggest to him that he talk to a counselor, faculty member, or other adult.

1 2 3 4 5 6 7 8 9
53. Talk, yourself, to a counselor, faculty member, or other adult.

1 2 3 4 5 6 7 8 9
54. Try to convince him to study enough to stay in college.

1 2 3 4 5 6 7 8 9
55. Refrain from interfering in something that is his concern.

1 2 3 4 5 6 7 8 9
56. Show some interest, leaving to him whether to discuss his difficulties or not.

(78,79,80)

APPENDIX C

College Student Personnel Institute
Tenth and Dartmouth
Claremont, California

ATTITUDINAL DIFFERENTIAL

On each of the following pages a situation sometimes faced by college students is described. Below the statement of the situation are pairs of words that describe how you might feel in that situation. Please circle the number between the two words of each pair that best indicates how you would probably feel if faced with the situation described at the top of the page. Be sure to look at both words of a pair before making your judgment, since the meaning of a word varies. Light as the opposite of dark, for example, is different from light as the opposite of heavy.

To illustrate, the situation described might be:

A friend is running for a student body office and asks you to be his campaign manager.

How would you feel?

cautious	1	2	[✓ 3]	4	5	6	7	8	9	venturesome
irritated	1	2	3	4	5	6	7	[✓ 8]	9	pleased

In the example, the person circled number 3, indicating he would probably feel moderately more cautious than venturesome, and number 8, indicating he would probably feel much more pleased than irritated. Number 5 is the midpoint and would be circled if he would be no more likely to feel one way than the other.

Please respond in a similar way to each of the situations described on the following pages, circling the numbers that best indicate how you would feel in each situation.

(1, 2)

(3, 4, 5)

A. A noted speaker is to talk next Tuesday evening at a public meeting in a nearby community. The college has no connection with the meeting, but one of your instructors offers to drive several students there to hear the talk.

How would you feel?

7.	hesitant	1	2	3	4	5	6	7	8	9	decisive
8.	calm	1	2	3	4	5	6	7	8	9	angry
9.	serious	1	2	3	4	5	6	7	8	9	playful
10.	receptive	1	2	3	4	5	6	7	8	9	rejecting
11.	irritated	1	2	3	4	5	6	7	8	9	pleased
12.	excited	1	2	3	4	5	6	7	8	9	bored
13.	apprehensive	1	2	3	4	5	6	7	8	9	confident
14.	relaxed	1	2	3	4	5	6	7	8	9	tense
15.	cautious	1	2	3	4	5	6	7	8	9	venturesome
16.	competent	1	2	3	4	5	6	7	8	9	inadequate
17.	detached	1	2	3	4	5	6	7	8	9	involved
18.	critical	1	2	3	4	5	6	7	8	9	tolerant
19.	impulsive	1	2	3	4	5	6	7	8	9	restrained

B. A student publication has carried an article on birth control pills. The college administration has halted distribution of the publication, stating the article is not in good taste or appropriate for college publications.

How would you feel?

20.	hesitant	1	2	3	4	5	6	7	8	9	decisive
21.	calm	1	2	3	4	5	6	7	8	9	angry
22.	serious	1	2	3	4	5	6	7	8	9	playful
23.	receptive	1	2	3	4	5	6	7	8	9	rejecting
24.	irritated	1	2	3	4	5	6	7	8	9	pleased
25.	excited	1	2	3	4	5	6	7	8	9	bored
26.	apprehensive	1	2	3	4	5	6	7	8	9	confident
27.	relaxed	1	2	3	4	5	6	7	8	9	tense
28.	cautious	1	2	3	4	5	6	7	8	9	venturesome
29.	competent	1	2	3	4	5	6	7	8	9	inadequate
30.	detached	1	2	3	4	5	6	7	8	9	involved
31.	critical	1	2	3	4	5	6	7	8	9	tolerant
32.	impulsive	1	2	3	4	5	6	7	8	9	restrained

C. A weekend is approaching during which no organized campus activity is planned. You are completely caught up on your studies and have no exams coming up and no papers due.

How would you feel?

33.	hesitant	1	2	3	4	5	6	7	8	9	decisive
34.	calm	1	2	3	4	5	6	7	8	9	angry
35.	serious	1	2	3	4	5	6	7	8	9	playful
36.	receptive	1	2	3	4	5	6	7	8	9	rejecting
37.	irritated	1	2	3	4	5	6	7	8	9	pleased
38.	excited	1	2	3	4	5	6	7	8	9	bored
39.	apprehensive	1	2	3	4	5	6	7	8	9	confident
40.	relaxed	1	2	3	4	5	6	7	8	9	tense
41.	cautious	1	2	3	4	5	6	7	8	9	venturesome
42.	competent	1	2	3	4	5	6	7	8	9	inadequate
43.	detached	1	2	3	4	5	6	7	8	9	involved
44.	critical	1	2	3	4	5	6	7	8	9	tolerant
45.	impulsive	1	2	3	4	5	6	7	8	9	restrained

D. You're having coffee with some other students in the student union or some other place where students frequently go for coffee, cokes, or hamburger. Some students get pretty boisterous and start throwing wet napkins and flipping pats of butter at each other.

How would you feel?

46.	hesitant	1	2	3	4	5	6	7	8	9	decisive
47.	calm	1	2	3	4	5	6	7	8	9	angry
48.	serious	1	2	3	4	5	6	7	8	9	playful
49.	receptive	1	2	3	4	5	6	7	8	9	rejecting
50.	irritated	1	2	3	4	5	6	7	8	9	pleased
51.	excited	1	2	3	4	5	6	7	8	9	bored
52.	apprehensive	1	2	3	4	5	6	7	8	9	confident
53.	relaxed	1	2	3	4	5	6	7	8	9	tense
54.	cautious	1	2	3	4	5	6	7	8	9	venturesome
55.	competent	1	2	3	4	5	6	7	8	9	inadequate
56.	detached	1	2	3	4	5	6	7	8	9	involved
57.	critical	1	2	3	4	5	6	7	8	9	tolerant
58.	impulsive	1	2	3	4	5	6	7	8	9	restrained

E. One of your instructors offers to let a limited number of students spend the semester working independently, each one on his own, not going to any classes or taking any tests, but meeting individually with the instructor from time to time.

How would you feel?

59.	hesitant	1	2	3	4	5	6	7	8	9	decisive
60.	calm	1	2	3	4	5	6	7	8	9	angry
61.	serious	1	2	3	4	5	6	7	8	9	playful
62.	receptive	1	2	3	4	5	6	7	8	9	rejecting
63.	irritated	1	2	3	4	5	6	7	8	9	pleased
64.	excited	1	2	3	4	5	6	7	8	9	bored
65.	apprehensive	1	2	3	4	5	6	7	8	9	confident
66.	relaxed	1	2	3	4	5	6	7	8	9	tense
67.	cautious	1	2	3	4	5	6	7	8	9	venturesome
68.	competent	1	2	3	4	5	6	7	8	9	inadequate
69.	detached	1	2	3	4	5	6	7	8	9	involved
70.	critical	1	2	3	4	5	6	7	8	9	tolerant
71.	impulsive	1	2	3	4	5	6	7	8	9	restrained

(78, 79, 80)

F. In an informal discussion with a small group of students--some good friends and some casual acquaintances--one of the students you don't know very well describes a point of view with which you disagree strongly.

How would you feel?

7.	hesitant	1	2	3	4	5	6	7	8	9	decisive
8.	calm	1	2	3	4	5	6	7	8	9	angry
9.	serious	1	2	3	4	5	6	7	8	9	playful
10.	receptive	1	2	3	4	5	6	7	8	9	rejecting
11.	irritated	1	2	3	4	5	6	7	8	9	pleased
12.	excited	1	2	3	4	5	6	7	8	9	bored
13.	apprehensive	1	2	3	4	5	6	7	8	9	confident
14.	relaxed	1	2	3	4	5	6	7	8	9	tense
15.	cautious	1	2	3	4	5	6	7	8	9	venturesome
16.	competent	1	2	3	4	5	6	7	8	9	inadequate
17.	detached	1	2	3	4	5	6	7	8	9	involved
18.	critical	1	2	3	4	5	6	7	8	9	tolerant
19.	impulsive	1	2	3	4	5	6	7	8	9	restrained

G. **You've just received a very low grade in an important exam in which you had expected to do well.**

How would you feel?

20.	**hesitant**	1	2	3	4	5	6	7	8	9	**decisive**
21.	**calm**	1	2	3	4	5	6	7	8	9	**angry**
22.	**serious**	1	2	3	4	5	6	7	8	9	**playful**
23.	**receptive**	1	2	3	4	5	6	7	8	9	**rejecting**
24.	**irritated**	1	2	3	4	5	6	7	8	9	**pleased**
25.	**excited**	1	2	3	4	5	6	7	8	9	**bored**
26.	**apprehensive**	1	2	3	4	5	6	7	8	9	**confident**
27.	**relaxed**	1	2	3	4	5	6	7	8	9	**tense**
28.	**cautious**	1	2	3	4	5	6	7	8	9	**venturesome**
29.	**competent**	1	2	3	4	5	6	7	8	9	**inadequate**
30.	**detached**	1	2	3	4	5	6	7	8	9	**involved**
31.	**critical**	1	2	3	4	5	6	7	8	9	**tolerant**
32.	**impulsive**	1	2	3	4	5	6	7	8	9	**restrained**

H. You've been spending one evening a week tutoring high school students in a low income section of town. The ones you're working with seem fairly bright, but uninterested in learning and unwilling to put much effort into studying.

How would you feel?

33.	hesitant	1	2	3	4	5	6	7	8	9	decisive
34.	calm	1	2	3	4	5	6	7	8	9	angry
35.	serious	1	2	3	4	5	6	7	8	9	playful
36.	receptive	1	2	3	4	5	6	7	8	9	rejecting
37.	irritated	1	2	3	4	5	6	7	8	9	pleased
38.	excited	1	2	3	4	5	6	7	8	9	bored
39.	apprehensive	1	2	3	4	5	6	7	8	9	confident
40.	relaxed	1	2	3	4	5	6	7	8	9	tense
41.	cautious	1	2	3	4	5	6	7	8	9	venturesome
42.	competent	1	2	3	4	5	6	7	8	9	inadequate
43.	detached	1	2	3	4	5	6	7	8	9	involved
44.	critical	1	2	3	4	5	6	7	8	9	tolerant
45.	impulsive	1	2	3	4	5	6	7	8	9	restrained

I. Some friends ask you to join them in an activity you ordinarily disapprove of, (a somewhat wild party; trying out pep pills, pot, LSD, or some other drugs; a prank involving petty theft; or something else that's questionable in your value system).

How would you feel?

46.	hesitant	1	2	3	4	5	6	7	8	9	decisive
47.	calm	1	2	3	4	5	6	7	8	9	angry
48.	serious	1	2	3	4	5	6	7	8	9	playful
49.	receptive	1	2	3	4	5	6	7	8	9	rejecting
50.	irritated	1	2	3	4	5	6	7	8	9	pleased
51.	excited	1	2	3	4	5	6	7	8	9	bored
52.	apprehensive	1	2	3	4	5	6	7	8	9	confident
53.	relaxed	1	2	3	4	5	6	7	8	9	tense
54.	cautious	1	2	3	4	5	6	7	8	9	venturesome
55.	competent	1	2	3	4	5	6	7	8	9	inadequate
56.	detached	1	2	3	4	5	6	7	8	9	involved
57.	critical	1	2	3	4	5	6	7	8	9	tolerant
58.	impulsive	1	2	3	4	5	6	7	8	9	restrained

J. A friend of yours who is a good student has lately begun missing most of his classes, studies little if at all, is obviously upset over something, and is talking about leaving college.

How would you feel?

59.	hesitant	1	2	3	4	5	6	7	8	9	decisive
60.	calm	1	2	3	4	5	6	7	8	9	angry
61.	serious	1	2	3	4	5	6	7	8	9	playful
62.	receptive	1	2	3	4	5	6	7	8	9	rejecting
63.	irritated	1	2	3	4	5	6	7	8	9	pleased
64.	excited	1	2	3	4	5	6	7	8	9	bored
65.	apprehensive	1	2	3	4	5	6	7	8	9	confident
66.	relaxed	1	2	3	4	5	6	7	8	9	tense
67.	cautious	1	2	3	4	5	6	7	8	9	venturesome
68.	competent	1	2	3	4	5	6	7	8	9	inadequate
69.	detached	1	2	3	4	5	6	7	8	9	involved
70.	critical	1	2	3	4	5	6	7	8	9	tolerant
71.	impulsive	1	2	3	4	5	6	7	8	9	restrained

(78, 79, 80)

APPENDIX D

College Student Personnel Institute
Tenth and Dartmouth
Claremont, California

Student Type Indicator

On the following pages are pairs of one sentence descriptions of a number of imaginary college students. Please rate how similar or dissimilar the members of each of these pairs are by circling one of the numbers along the scale of similarity.

Each pair of statements is meant to describe two different students, and even though you're given only one statement about each student, try to imagine them as two real, complete people. Please remember, too, that you are to estimate how similar those two students are.

Although the pairs of students are described in masculine terms--he and him--they can equally well be considered women, but both members of a pair should be considered as the same sex.

Example:

He is more interested in social activity than in studies.	He spends many Saturday evenings studying.

Almost identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	[✓ 8]	9

The rater decided that these two students were almost completely different, so he circled 8 on the scale. The other numbers on the scale have the meaning indicated above them. If the two students had been considered similar in some ways and different in others, one of the middle numbers--4, 5, or 6--would have been circled.

The purpose of all this is to identify types of students, as you perceive them, among the various imaginary students described. You may begin on the next page with number 7; there are no items numbered 1 to 6.

Form B

(1,2)

(3,4,5)

7. He often questions what the purpose of college is after all.

His major purpose in college is to get prepared for an occupation.

Almost identical

Somewhat similar, Somewhat different

Completely different

1 2 3 4 5 6 7 8 9

8. He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

He is concerned with esthetic qualities --in art, music, literature, or drama.

1 2 3 4 5 6 7 8 9

. He is concerned with esthetic qualities --in art, music, literature, or drama.

He works for good grades because they are what employers will be interested in at graduation.

1 2 3 4 5 6 7 8 9

. His major concern is understanding himself and his relationships with others.

He is more concerned with exploring ideas than with getting grades.

1 2 3 4 5 6 7 8 9

. His high points of the year are Homecoming Week, the Spring Carnival and similar all-campus events.

He is frequently found in a hot discussion of an issue that came up in class.

1 2 3 4 5 6 7 8 9

. His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

He remains pretty much independent of other students' standards and of group pressures.

1 2 3 4 5 6 7 8 9

. He remains pretty much independent of other students' standards and of group pressures.

He puts considerable importance on being recognized as a leader by the other students.

1 2 3 4 5 6 7 8 9

14. He gets more involved with off-campus groups than with those on campus.

He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

Almost Identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	8	9

15. His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

His high points of the year are Homecoming Week, the Spring Carnival and similar all-campus events.

1 2 3 4 5 6 7 8 9

16. He is more concerned with exploring ideas with getting grades.

He puts considerable importance on being recognized as a leader by the other students.

1 2 3 4 5 6 7 8 9

17. He is often involved in social concerns and protests, seeking and supporting change.

He works for good grades because they are what employers will be interested in at graduation.

1 2 3 4 5 6 7 8 9

18. His major purpose in college is to get prepared for an occupation.

He is often involved in social concerns and protests, seeking and supporting change.

1 2 3 4 5 6 7 8 9

19. He gets more involved with off-campus groups than with those on campus.

He sees little value in customs and traditions, remaining detached from them or even hostile.

1 2 3 4 5 6 7 8 9

20. His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

He puts considerable importance on being recognized as a leader by the other students.

1 2 3 4 5 6 7 8 9

21. He is often involved in social concerns and protests, seeking and supporting change.

He sees little value in customs and traditions, remaining detached from them or even hostile.

Almost identical	Somewhat similar, somewhat different	Completely different

1 2 3 4 5 6 7 8 9

22. His major concern is knowing and being accepted by people considered important whether they are students, faculty, or administrators.

He works for good grades because they are what employers will be interested in at graduation.

1 2 3 4 5 6 7 8 9

23. He is concerned with esthetic qualities --in art, music, literature, or drama.

He puts considerable importance on being recognized as a leader by the other students.

1 2 3 4 5 6 7 8 9

24. He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

He looks for new experiences or new approaches to familiar situations.

1 2 3 4 5 6 7 8 9

25. His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

He is more concerned with exploring ideas than with getting grades.

1 2 3 4 5 6 7 8 9

26. He doesn't see much point in classes that don't give something useful in a job.

He looks for new experience or new approaches to familiar situations.

1 2 3 4 5 6 7 8 9

27. He remains pretty much independent of other students' standards and of group pressures.

He gets more involved with off-campus groups than with those on campus.

Almost identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	8	9

28. He works for good grades because they are what employers will be interested in at graduation.

His high points of the year are Homecoming Week, the Spring Carnival and similar all-campus events.

1 2 3 4 5 6 7 8 9

29. He sees little value in customs and traditions, remaining detached from them or even hostile.

His major concern is understanding himself and his relationships with others.

1 2 3 4 5 6 7 8 9

30. He is concerned with esthetic qualities --in art, music, literature, or drama.

He remains pretty much independent of other students' standards and of group pressures.

1 2 3 4 5 6 7 8 9

31. He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

He doesn't see much point in classes that don't give him something useful in a job.

1 2 3 4 5 6 7 8 9

32. He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

He remains pretty much independent of other students' standards and of group pressures.

1 2 3 4 5 6 7 8 9

33. His major purpose in college is to get prepared for an occupation.

He doesn't see much point in classes that don't give him something useful in a job.

1 2 3 4 5 6 7 8 9

34. He works for good grades because they are what employers will be interested in at graduation.	He gets more involved with off-campus groups than with those on campus.

Almost Identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	8	9

35. He sees little value in customs and traditions, remaining detached from them or even hostile.	He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

1 2 3 4 5 6 7 8 9

36. His high points of the year are Homecoming Week, the Spring Carnival and similar all-campus events.	He sees little value in customs and traditions, remaining detached from them or even hostile.

1 2 3 4 5 6 7 8 9

37. He works for good grades because they are what employers will be interested in at graduation.	He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

1 2 3 4 5 6 7 8 9

38. He gets so interested in the ideas of a course that he often doesn't do the routine classwork.	His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

1 2 3 4 5 6 7 8 9

39 He is frequently found in a hot discussion of an issue that came up in class	He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

1 2 3 4 5 6 7 8 9

40. He often questions what the purpose of college is after all.	He is more concerned with exploring ideas than with getting grades.

1 2 3 4 5 6 7 8 9

41. He doesn't see much point in classes that don't give him something useful in a job.	He works for good grades because they are what employers will be interested in at graduation.

Almost identical	Somewhat similar, somewhat different	Completely different

1 2 3 4 5 6 7 8 9

42. He often questions what the purpose of college is after all.	He is often involved in social concerns and protests, seeking and supporting change.

1 2 3 4 5 6 7 8 9

43. He sometimes gets so interested in a topic he goes into it more deeply than the course requires.	He is more concerned with exploring ideas than with getting grades.

1 2 3 4 5 6 7 8 9

44. He is more concerned with exploring ideas than with getting grades.	He works for good grades because they are what employers will be interested in at graduation.

1 2 3 4 5 6 7 8 9

45. He gets so interested in the ideas of a course that he often doesn't do the routine classwork.	He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

1 2 3 4 5 6 7 8 9

46. He is concerned with esthetic qualities --in art, music, literature, or drama.	He looks for new experiences or new approaches to familiar situations.

1 2 3 4 5 6 7 8 9

47. His high points of the year are Homecoming Week, the Spring Carnival and similar all-campus events.	He often questions what the purpose of college is after all.

1 2 3 4 5 6 7 8 9

48. He gets so interested in the ideas of a course that he often doesn't do the routine classwork.

He is often involved in social concerns and protests, seeking and supporting change.

Almost identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	8	9

49. He looks for new experiences or new approaches to familiar situations.

He sees little value in customs and traditions, remaining detached from them or even hostile.

1 2 3 4 5 6 7 8 9

50. He puts considerable importance on being recognized as a leader by the other students.

He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

1 2 3 4 5 6 7 8 9

51. He is frequently found in a hot discussion of an issue that came up in class.

He doesn't see much point in classes that don't give him something useful in a job.

1 2 3 4 5 6 7 8 9

52. He often questions what the purpose of college is after all.

He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

1 2 3 4 5 6 7 8 9

53. His major purpose in college is to get prepared for an occupation

His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

1 2 3 4 5 6 7 8 9

54. His major concern is knowing and being accepted by people considered important, whether they are students, faculty, or administrators.

He is concerned with esthetic qualities --in art, music, literature, or drama.

1 2 3 4 5 6 7 8 9

55. He works for good grades because they are what employers will be interested in at graduation.

He sometimes gets so interested in a topic he goes into it more deeply than the course requires.

Almost identical				Somewhat similar, somewhat different				Completely different
1	2	3	4	5	6	7	8	9

56. He works for good grades because they are what employers will be interested in at graduation.

He is frequently found in a hot discussion of an issue that came up in class.

1 2 3 4 5 6 7 8 9

57. His major concern is understanding himself and his relationships with others.

He doesn't see much point in classes that don't give him something useful in a job.

1 2 3 4 5 6 7 8 9

(78, 79, 80)

APPENDIX E

COLLEGE STUDENT PERSONNEL INSTITUTE
Tenth and Dartmouth
Claremont, California

BIOGRAPHICAL INFORMATION

Please check items 2,3,4,~~5~~ and 6, and fill in the blanks for the other items.

Date: ____________

1. College: ______________________________

(1,2) 03 04 05 (3,4,5)

2. Sex: M ____ (7) 1

F ____ 2

3. Year of Birth:

After 1949	________	(8) 1
1948	________	2
1947	________	3
1946	________	4
1945	________	5
1944	________	6
1943	________	7
1936-1942	________	8
Before 1936	________	9

4. Marital Status:

Single	____	(9) 1
Married	____	2
Divorced	____	3
Separated	____	4
Widowed or Widower	____	5

5. Ages of your

brothers: ____________ (10) 0 1 2 3 4 5 6
(11) 1 2 3 4 5 6 7

sisters: ____________ (12) 0 1 2 3 4 5 6
(13) 1 2 3 4 5 6 7
(14) 0 1 2 3 4 5 6 7 8 9
(15) 1 2 3 4 5 6 7 8 9

6. Most of my classes are held

before 4:00 p.m. ________ (16) 1

after 4:00 p.m. or Saturday ________ 2

7. High school attended: ______________________________

City and state: ______________________________

- -

Name: ____

Your name will be cut off after you have been given a code number.

Biographical Information -- Page 2

Field of study (if decided): ______________________________ (17,18)

		College residence:	Number of semester hours:		
(19) 1.	_______	Dormitory	1 - 6	_______	(20) 1
2.	_______	Fraternity or sorority	7 - 9	_______	2
3.	_______	Co-op	10 - 11	_______	3
4.	_______	Rooming house	12 - 15	_______	4
5.	_______	Private room or apartment	16 - 18	_______	5
6.	_______	Parents' home	More than 18	_______	6
7.	_______	Home of friends or relatives			
8.	_______	Other (specify): ______________________________			

Father's education				Mother's education
(21) _______	1.	Eighth grade or less	(22) 1.	_______
_______	2.	Some high school	2.	_______
_______	3.	High school graduate	3.	_______
_______	4.	Some college	4.	_______
_______	5.	College graduate	5.	_______
_______	6.	Master's degree	6.	_______
_______	7.	Law, medical, dental, or veterinary degree	7.	_______
_______	8.	PhD	8.	_______

Father's occupation: ______________________________ (23,24,25)

Mother's occupation: ______________________________ (26,27,28)